





THE



SUCCESS
LIBRARY



DR. ORISON SWETT MARDEN

EDITOR-IN-CHIEF

GEORGE RAYWOOD DEVITT, M. A.

MANAGING EDITOR

THIRTY VOLUMES

VOLUME TWENTY-NINE

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

AE6
M4

THE LIBRARY OF
CONGRESS,
TWO COPIES RECEIVED
JUN. 2 1902
COPYRIGHT ENTRY
May 13, 1902
CLASS *a*XXc. No.
32871
COPY B.

COPYRIGHT, 1902,
BY
THE SUCCESS COMPANY

All Rights Reserved

© 1902 Success Company
© 1902 Success Company
© 1902 Success Company
© 1902 Success Company
© 1902 Success Company

© 1902 Success Company
© 1902 Success Company
© 1902 Success Company
© 1902 Success Company
© 1902 Success Company

- Gorgons.**—Legendary beings or monsters in Greek mythology, having wings, brazen claws, and enormous teeth.
- Goring, George.**—(1608-1657.) An English general.
- Gorilla, The.**—See MONKEY, 2451.
- Gortchakoff, Prince Alexander Mikhailovitch.**—(1798-1883.) A distinguished Russian statesman.
- Goschen, George Joachim.**—Born, 1831. An English politician and financier.
- Gosnold, Bartholomew.**—Died at Jamestown, Va., 1607; one of the founders of the settlement at Jamestown. He was also the discoverer of Cape Cod, and Martha's Vineyard in 1602.
- Gossaert, or Gessert, Jan.**—Died, 1541; a noted Flemish painter.
- Gosse, Edmund Wm.**—An English poet and littérateur, son of Philip Henry Gosse, the naturalist, was born in London in 1849. In early life he was assistant-librarian in the British Museum and translator to the English Board of Trade. He has traveled extensively, especially in the northern countries of Europe, where he made a study of Scandinavian literature, and has published many translations of the novels of such writers as Björnson, Jonas Lie, and other Norwegian authors. He has also published a mediæval romance of his own, entitled "The Secret of Narcisse," together with many monographs on English writers, poets, and littérateurs. Among his published works are: "Seventeenth Century Studies," "From Shakespeare to Pope," "History of Eighteenth Century Literature," "Gossip in a Library," "The Jacobean Poets," with lives of Gray, Congreve, and Sir Walter Raleigh.
- Gotha.**—In Prussia, a city of the duchy of Saxe-Coburg-Gotha, and the seat of residence, alternating with Coburg, of its dukes. Pop., 32,000.
- Gotham.**—(1) A parish of Nottinghamshire, England, the people of which have long had a reputation for their simplicity. "The Wise Men of Gotham" is the term that has been applied to them. (2) A name applied to New York City.
- Göteborg, or Gottenburg.**—A seaport of Sweden; the second city of the country. Pop. (1899), 126,849.
- Gothic.**—A term applied to the language, arts, etc., of the Goths, a Teutonic race that first appeared along the lower courses of the Danube in the 3d century. They were divided, later, into the Visigoths (West Goths) and the Ostrogoths (East Goths) and they exerted a powerful influence in Europe during the Middle Ages.
- Götterdämmerung** (TWILIGHT OF THE GODS).—The fourth part of Wagner's "Ring des Nibelungen."
- Gottfried von Strasburg.**—Born near the close of the 12th century; a Middle High German poet.
- Göttingen.**—A town of Hanover, Prussia. The seat of a noted university and library.
- Gottschalk, Louis Moreau.**—(1829-1869.) A noted pianist; of French and English parentage.
- Gottsched, Johann Christoph.**—(1700-1766.) A noted German author and critic.
- Gough, J. B.**—A noted Anglo-American orator, lecturer, and temperance advocate. In the latter cause, he labored for many years in this country and in England with great zeal and enthusiasm, and perhaps was more successful from the fact that in early life he had himself been of dissipated habits, but had recovered and reformed. His writings embrace, besides an "Autobiography" and a series of temperance lectures, a work which he called "Gleanings from My Life-Work." Gough was born in Kent, England, in 1817, and died at Philadelphia in 1886.
- Goujon, Jean.**—Died about 1568. A celebrated French sculptor.
- Gould, Jay.**—Born at Roxbury, N. Y., 1836; died at New York, 1892. A noted American capitalist and financier. He acquired large wealth by the management of railroads.

GOUNOD

CHARLES FRANÇOIS GOUNOD was born in Paris, June 17, 1818. Both of his parents possessed highly refined, artistic tastes. His father, a painter and engraver of talent, died when Charles was five years old, and to his mother, who was a distinguished pianist, Gounod attributed all that he achieved in art. In his autobiography, which is a tribute of filial love and admiration, he says: "If I have worked any good, by word or deed, during my life, I owe it to my mother, and to her I give the praise." From her, Gounod received his first musical education.

Already a proficient pianist, Gounod took a thorough course in the classics at the *Lycée St. Louis*, receiving the degree of Bachelor of Letters. He considered that there were three events in his childhood which determined his career. These were the hearing of Weber's *Der Freischütz*, when he was seven years old, of Rossini's *Othello*, when he was thirteen, and of Mozart's *Don Giovanni*, at fourteen. These events he called the "Three Shocks" that brought to consciousness his musical being. Madame Gounod did not consent that he should follow music as a profession until she was convinced that his gifts were of a sufficiently high order. She asked the opinion of the

teacher, Reicha, who replied: "I think, my dear lady, that it is no use trying to stop him."

Accordingly, after finishing his academic course, the young Gounod, at the age of eighteen, entered the Paris conservatory. The following year, his cantata *Marie Stuart and Rizzio* won the second prize of the Institute of France. In 1839, his cantata, *Fernand*, took the first prize, the "Grand Prix de Rome," and he was thereby enabled to spend three years in Rome and six months in Vienna. Gounod returned to Paris at the age of twenty-five, a finished musician, and received the humble appointment of organist and chapel-master at the church of the Foreign Missions, the church of the parish in which his mother lived. He at this time had thoughts of giving up a musical career in order to enter the church, and for two years, with that step in view, he pursued a course in theology. So generally was it expected that he would take holy orders, that he was called, "Abbe Gounod." At last he realized that it would be impossible for him to live without his art, and once more entered the world. To this experience, he owed scholastic attainments and a love of reading rarely possessed by modern musicians.

Gounod was irresistibly attracted to operatic composition, but he had no opportunity for a beginning in this direction until the performance in London of his *Messe Solennelle* won such high commendation from both the English and French press that the composer was commissioned to write for the Grand Opera. In 1851, his first opera, *Sapho*, was produced, but it was not a popular success.

In 1852, Gounod was appointed conductor of the "Orphéon," the united male singing societies and vocal schools of Paris. He held this position for eight years, and the experience he gained in the possibilities of the voice, and in the various effects to be derived from bodies of voices, proved valuable to him in his operatic work. Two more operas failed, but in 1859, in the composer's forty-first year, *Faust* was produced at the Theatre Lyrique, and though not immediately successful in Paris, it soon placed Gounod in the front rank of living composers. It has achieved a world-wide success, unprecedented in the history of opera, and remains to-day the most popular of modern operas.

In 1867, *Romeo et Juliette* was produced with great success, and though it has never been as popular with the public as has *Faust*, it is thought by some connoisseurs to be his masterpiece. In 1870, during the Franco-Prussian War, Gounod removed to London. Here he lived a retired life, though he appeared several times in public with the Philharmonic Society and at the Crystal Palace. Returning to Paris, the composer produced some operas now little known. The last years of his life were devoted to sacred composition. In 1882, was performed the now well-known *Redemption*, and in 1885, *Mors et Vita*. Gounod contributed to various Paris journals, and published a book, *The Don Juan of Mozart*. He was elected a member of the Institute in 1866, and was a commander of the Legion of Honor. He married the daughter of Herr Zimmerman, the celebrated theologian and orator. His last act as a musician was to play the Requiem of the *Mors*, and three days later he died,—Oct. 18, 1893.

Gounod injected into the veins of French music a seriousness, a depth, and an imaginative power, which prove his indebtedness to the spirit of German music, and to German models. In spite of some contrary opinions, *Faust* is generally conceded to be his masterpiece. The theme has tempted many composers,—Schumann, Liszt, Wagner, Berlioz, and others,—with varying success. But Gounod's treatment is the most poetic and dramatic of them all. Except Beethoven's *Fidelio*, it is said, there is no



other opera containing so little weak music. It is characterized by fertility and freshness of melody, by masterly form, power and color of orchestration, and by dramatic vigor, a combination of qualities which does not exist in the same degree in the work of any of his contemporaries.

Governor.—The executive head of each of the states of the Union. After the Revolution the constitutions of each state provided for a single head to be called the governor. Their terms vary from 1 to 4 years and their salaries are from \$1,000 to \$10,000. To them is intrusted the execution of the laws, and they are usually invested with the veto and pardoning powers. In our early history the governors of many of the states were chosen by the legislatures thereof. At present the uniform practice is to elect the governor by popular vote.

Governor's Island.—A small fortified island in New York Harbor; belongs to the U. S. and is the headquarters of the Department of the Atlantic.

Gower, John.—Died, 1408. An English poet, best known to-day by his "Confessio Amantis."

Gracchi, The.—Two brothers of a noble Roman family of the name of Gracchus, who sought, in the interest of the people, to introduce reforms in the Roman state. The elder, named Tiberius Sempronius Gracchus, who had served in the wars in Spain, was in 134 B.C. elected tribune of the plebs (the common people), and attempted to pass an Agrarian law, by which the public lands would be divided to make small farms for the poor. This brought upon him the hostility of the nobles, who incited a riot in which Tiberius Gracchus and 300 of his followers were killed. The other brother, Caius Sempronius Gracchus, tried to carry out and extend his late brother's designs, and succeeded so far as to get the knights and the people on his side. He passed an Agrarian law and founded many colonies for the poor; but when he went further and sought to make all the Latin citizens of Rome, the Romans were so stirred by this that, though they gave way, the nobles once more incited a riot and killed Caius Gracchus and many of his plebs. It is of these two men that the story is told of a wealthy Roman lady who was showing their mother (Cornelia) all sorts of jewels and asked to be shown Cornelia's. Calling her two sons, of whom she was very proud, she put her arms about them and said, "These are my jewels!"

Grace, William Gilbert.—An English physician, born, 1848. He has the reputation of being the best all-round cricket player ever known. He is especially strong as a batsman.

Graces, The (Lat., *Gratiæ*, Greek, *Charites*), were in classical myth the goddesses of grace, beauty, refinement, and loveliness. Homer in the "Odyssey" speaks of the Graces as attendants on Aphrodite, the goddess of love and beauty, while Hesiod mentions three—Thalia, Aglaia, and Euphrosyne. The Spartans and Athenians, worshiped only two Graces, though under different names. The Graces are generally represented as daughters of Zeus by Hera,

and are usually portrayed as slightly draped or nude nymphs, bearing in their arms roses and myrtles, as well as musical instruments and dice.

Grackle, The.—2563.

Grady, Henry W.—Born, 1851; died at Atlanta, Ga., 1889. He was noted as an orator, and was editor of the Atlanta "Constitution."

Graham, Charles K.—Born at New York, 1824; died, 1889. A naval and military officer of the U. S. When the Civil War began, he was a subaltern in the navy, stationed at the Brooklyn Navy Yard. He preferred the army and was permitted to change to that branch of service. He was appointed colonel of the 74th N. Y. volunteers and took the field. He served to the end of the war, in the Army of the Potomac, rising to the grade of major-general by brevet.

Graham, Sylvester.—Born at Suffield, Conn., 1794; died at Northampton, Mass., 1851. An American vegetarian, best known as the advocate of the use of Graham flour.

Graham, William Alexander.—Born in N. C., 1804; died at Saratoga, N. Y., 1875. He became U. S. senator from N. C. in 1841, governor of N. C. in 1845, Secretary of the Navy in 1850, and Whig candidate for Vice-president in 1852.

Graham, William M.—Born in Va., 1798; killed at the battle of Molino del Rey, in Mexico, Sept. 8, 1847. An officer of the U. S. army who served with distinction in the Seminole and Mexican wars.

Grail.—A cup or chalice of emerald supposed to have been used by Christ at the Last Supper. See ARTHURIAN LEGEND, 1781.

Grain-Elevators are buildings constructed for elevating, storing, and loading grain into railroad cars and vessels. In their magnitude, they are best seen in the chief shipping ports of the country, and in the west in the great grain centers where the grain is collected for storage and shipment. Their capacity varies greatly, the largest elevators being found in Chicago, one of which is capable of storing 50 million bushels, in Duluth, Minneapolis, and New York, each having a capacity of from 25 to 30 million bushels, and in Buffalo and St. Louis, with a capacity of from 12 to 15 million bushels. The vast trade in grain to-day in a center like Chicago, may be realized from the fact that that city now handles yearly about 250 million bushels of wheat, corn, oats, and rye.

Gramme.—The unit of the standard of weight in the French system. It is determined by the weight of a cubic centimeter of distilled water at 0° Centigrade. It is equal to 15.43248 grains Troy.

Gramophone.—A device for recording and reproducing sound, a sort of mechanical phonograph. It was invented by Émile Berliner, but so far

the invention has been little more than a source of entertainment and amusement. The reproducing mechanism consists of a stylus that falls into grooved lines on a rubber plate, and is governed by a sensitive spring that enables it to receive the vibrations recorded thereon and transmit them in turn to a diaphragm placed in a sounding box with a trumpet-shaped opening that augments the sound. The revolution of the plate under the stylus, which may be effected by a hand or pedal crank, causes the sounds first recorded on the zinc disk to be reproduced audibly.

Grampians.—An extensive mountain system in Scotland, dividing the Highlands from the Lowlands. Ben Nevis (4,406 ft.) is the highest peak.

Granada.—(1) A former kingdom of Spain, held by the Moors until taken by Ferdinand in 1492.

Granada.—A city and province of Andalusia, in southern Spain, lying to the northeast of the port of Malaga on the Mediterranean. The lower levels of the province are very fertile—the richest in the whole peninsula; the higher portions form part of the chain of the Sierra Nevada Mountains, which feed the Genil River, near which the city of Granada is built, and which flows northward into the Guadalquivir. The ancient sections of the capital of the province retain much of its early Moorish architecture, with many monasteries, convents, and churches in which are a number of notable paintings by Murillo and other great artists. In its best days, from the 13th to the 15th centuries, Granada rose to great splendor as the exclusive seat of Islam in Spain, especially in the era when the great palace and citadel of the Alhambra was built. Pop., to-day, 75,000.

Granby Token.—An unauthorized coin issued by John Higley, of Granby, Conn., in 1737. It was made of copper and on the obverse bore a deer, with the words "Value me as you please," the Roman numerals III., and a crescent. The design on the reverse consisted of three hammers on a triangular field, each bearing a crown. The legend was, "I am good copper."

Grand Canal.—The principal canal in Venice running in an irregular course through the city.

Grand Cañon of the Colorado.—The cañons of the Rio Colorado have been noted for their commanding beauty, especially since 1869, when the river was explored by the Powell Survey expedition. The Grand Cañon occurs in the middle course of the river, and extends for a distance of nearly 200 miles westward from the junction of the Colorado Chiquito. Its walls rise almost sheer from the water's edge to a height of from 4,000 to 6,500 feet. The main stream (known as the Green River) has its source in Fremont's Peak, in western Wyoming, and flowing through Utah and Arizona empties into the Gulf of California—a total distance of about 2,000 miles. It is navigable for 600 miles to Callville.

Grandfather's Chair.—A collection of children's stories, written by Hawthorne in 1841, which was followed by a second series in 1842.

Grand Forks.—A city in N. D. It has an extensive lumber trade and is the seat of the University of North Dakota. Pop. (1900), 7,652.

Grand Jury.—A jury whose duty it is to inquire into charges for offenses and to determine whether indictments shall be brought against alleged criminals in any court. The custom is very ancient and has been scrupulously guarded as a safeguard of civil liberty since the time of Ethelred, an Anglo-Saxon king of the 9th century. Its members sit in absolute secrecy, and may either pass upon bills presented by the prosecuting officer of the state, or upon presentments made by one of their own number, or upon evidence laid before them of any violation of the law. The proceedings are entirely *ex parte*. Witnesses only for the prosecution are examined. If the requisite number of jurors are satisfied from the evidence presented of the truth of the accusation, they write across the indictment the words, "A true bill," but if the evidence is unsatisfactory the indorsement is, "Not a true bill." After all the indictments have been considered, the work of the grand jury is ended and the cases are turned over to the court and petit jury for trial.

Grand Prix (gron'prê), Le.—The great horse race at Longchamps in the Bois de Boulogne, Paris, established by Napoleon III. It takes place on Sunday of Ascot week and the prize is 20,000 francs.

Grand Prix de Rome.—The prize given annually by the Academy of Fine Arts in Paris to the competitor who passes the most successful examination in sculpture, painting, engraving, music, or architecture. The winner goes to Rome for four years at the expense of the government.

Grand Rapids.—A city in Mich., situated at the rapids of the Grand River. It is the center of an important manufacturing and commercial district. Pop. (1900), 87,565.

Granet, François Marius.—French artist, 3457.

Granger, Francis.—Born at Suffield, Conn., 1792; died at Canandaigua, N. Y., 1868. He was the son of Gideon Granger and postmaster-general in 1841.

Granger, Gideon.—Born at Suffield, Conn., 1767; died at Canandaigua, N. Y., 1822; was postmaster-general (1801-14).

Granger, Gordon.—Born in New York, 1821; died, 1876. He was a graduate of West Point and served in the Mexican War; was made a brig.-gen. in 1861 and early in the Civil War commanded a brigade of cavalry operating in northern Miss.; was promoted to maj.-gen.; commanded the reserve corps at Chickamauga and the 4th corps at Missionary Ridge and in the campaign immediately following for the relief of Knoxville in eastern Tenn.; in the closing months of the war he commanded the land forces which coöperated with Admiral Farragut in the reduction of Fort Morgan and the capture of Mobile.

Grangers.—A common name for the Patrons of Husbandry, a secret association for the protection of agricultural interests. The society had

its origin in the depressed condition of agriculture immediately succeeding the Civil War. Its object was to redress the grievances of the farmers against the middlemen and railroad companies. The plan of organization embraces a secret ritual. It was organized in Washington, Dec. 4, 1867, by employees of the Department of Agriculture. In a manifesto issued in 1874, the objects of the Grangers were declared to be "to develop a better and higher manhood and womanhood, to enhance the comforts of our home; to buy less and produce more, to discontinue the credit system that tends to prodigality and bankruptcy." In 1884 its membership was 4,000,000. The organization has since lost many of its members and in some sections has ceased to exist.

Grani'cus.—A small river in Asia Minor where Alexander the Great won his first victory over the Persians in 334 B. C.

Granite State, The.—A name applied to N. H. on account of its abundant granite.

Gran Rennion Americana.—A secret political society founded in London by Francisco Miranda at the close of the 18th century. Its object was the emancipation of the American colonies from Spanish rule.

Grant, Ulysses Simpson.—(Sketch of), 228.

Grape, The.—2886.

Graphite.—Also called, but incorrectly, plumbago and black lead, is an allotropic form of carbon, and in composition identical with charcoal and with diamonds. As a mineral it occurs both massed and disseminated in rock, generally in granite, gneiss, mica schist, and crystallized limestone. It is used largely in the manufacture of lead pencils, and in electrotyping. In its crystalline form it is produced largely at Ticonderoga, N. Y., as well as in Clay Co., Ala., and in Chester Co., Pa. The amorphous graphite is mined in R. I. and in Mich. It is also found in Cumberland, England, in Ceylon, Siberia, and in parts of Austria, Germany, and France. An artificial graphite, produced from carbon, is manufactured by the Carborundum Co., at Niagara Falls, N. Y. The quantity of amorphous graphite produced in this country in 1899 was over 2,300 short tons, while of refined crystalline graphite the U. S. produced in the same year nearly 3,000,000 pounds weight. Another concern at Niagara Falls, N. Y., produced in 1899 over 400,000 pounds of graphitized carbons for use in the shape of anodes and electrodes in alkali manufacture and for self-lubricating motor brushes. Graphite is now also produced powdered and in flakes.

Grasses.—More than 1,300 species of grass have been discovered in North America, and of this number a large proportion is found growing in the United States; 400 or more species are noticed in the Southern States alone. When we recall the vast forage interests of the country, the subject of the growth of the various grasses is pertinent. Each summer, 70,000,000 tons of hay are cut and cured, and this crop is taken from 50,000,000 acres of land. The an-

nual crop is valued at \$600,000,000. During the past twenty years great progress has been made in the production of new forage plants, and in improved methods of feeding.

One the most valuable of grasses is the blue grass of Kentucky, which is most excellent for pasturage and for hay. It is distributed from Maine to the Gulf, and westward to the Pacific, and to Alaska. Nevada blue grass is a fine variety occurring in the Rocky Mountain regions of Montana, and Colorado. Sand blue grass (*Poa leckonbyi*) is a newly discovered species of eastern Washington that grows in almost pure sand, under conditions where well-known eastern grasses would fail entirely.

The lyme grasses present a number of varieties of especial interest. In some sections, Canadian lyme promises to be a most productive hay grass. Woodland lyme grass (*Elymus glaucus*) is a common grass of Montana, Washington, and Oregon. Giant lyme grass (*Elymus consatus*) is a tall rank-growing species peculiar to the region extending from the Pacific slope eastward to Montana. It is one of the dry-land grasses that may prove of considerable value for hay, or for grazing, in the dryer regions of the Northwest. Yellow lyme grass, and small sand lyme grass, are species of Oregon and Washington, which are excellent natural sand binders. There are large areas of this country bordering on the Atlantic and the Pacific coasts, the shores of the Great Lakes, and, frequently, on the banks of rivers, which are covered with shifting sands. In some cases, the shifting of these sands proves a serious menace to profitable agriculture, and often a danger to navigation. A few grasses have been found which may be utilized in effectually binding these shifting and destructive sands. Along the Columbia River, the spontaneous growth of the sand lyme grass has in many cases effectually checked the drifting of the sands which are blown out from the river bed.

The wheat grasses are characteristic grasses of the Northwest. Western wheat grass (*Agropyron spicatum*) known to many of the ranchers as bluestem, is one of the best of native grasses for hay. Meadow wheat grass, a closely allied species, is also a promising variety. Bunch wheat grass (*Agropyrum divergens*) may be classed as first among the dry-land species. It grows naturally in exceedingly dry soils, and in localities where the annual rainfall is light. This wheat grass and the two feather grasses (*Stipa viridula* and *Stipa comata*), common to the same region, are the most promising species for regrassing the overstocked ranges.

Blue grama (*Bouteloua oligostachya*), known also in some regions of Montana as buffalo grass, is one of the pasture grasses. It is readily propagated from seed and thrives in almost any soil. Side-oats (*grama*) has a wider natural range, and although making a turf, inferior to that of blue grama, it is nevertheless an excellent pasture grass, and under favorable circumstances yields an abundant hay crop.

In the mountain districts grow many native species of fescue. Creeping fescue, and sheep's fescue, exist in numerous varieties, some of them possessing many points of excellence. Aside from these two species there are others of equal value. King's fescue is one of these. It is a native of Colorado and has been successfully propagated from seeds which it yields abundantly. Buffalo bunch-grass covers extensive meadows in Montana; it affords excellent grazing, and is occasionally cut for hay.

With more than 1,000 known species of native grasses growing north of Mexico there are not more than a dozen native species under cultivation in this country yet; nearly all of the species are adaptable to general climates and soils. Many grasses would make beautiful acquisitions to floral gardens. A plant notable for its beauty and stateliness is the sea-side oat, found along the southern Atlantic coast.

The principal lawn-grasses now in use are Kentucky blue grass, creeping bent, and the Rhode Island bent, the first a species of *Poa* (*Poa pratensis*), the latter belong to the genus

like, leaves, but the turf formed by them may be harsh and unpleasant to the touch.

Grattan, Henry.—(1746–1820.) An Irish statesman and orator famous in law, as well as in the Irish and the Imperial Parliaments.

Gratz.—The capital of Styria, Austria-Hungary, situated on the Mur. Pop., 113,540.

Grave Creek Mound.—A prehistoric relic of the Mound-builders, near Elizabethtown, W. Va. It is 70 feet high and 1,000 feet in circumference.

Gravity, Specific.—The specific gravity of any substance is the weight of the body compared with the weight of an equal volume of water taken as a standard. To find this the body is weighed in air; it is then weighed in water. The loss of weight in water represents the weight of an equal volume of water. The loss of weight in water is then divided into the weight in air; the quotient is the specific gravity of the body.

Gravity, The Acceleration of.—This is represented in physical formulas as g and in one second of mean solar time is $32.086528 + 0.171293 \sin^2 l$ feet. The half of this is the distance through which a body falls in a vacuum in one second.

The following table gives the specific gravity of both liquids and solids:—

Water.....	100	Cork.....	24	Indigo.....	77	Granite.....	278
Sea-water.....	103	Poplar.....	38	Ice.....	92	Diamond.....	353
Dead Sea.....	124	Fir.....	55	Gunpowder.....	93	Cast iron.....	721
Alcohol.....	84	Cedar.....	61	Butter.....	94	Tin.....	729
Turpentine.....	99	Pear.....	66	Clay.....	120	Bar iron.....	779
Wine.....	100	Walnut.....	67	Coal.....	130	Steel.....	783
Urine.....	101	Cherry.....	72	Opium.....	134	Brass.....	840
Cider.....	102	Maple.....	75	Honey.....	145	Copper.....	895
Beer.....	102	Ash.....	84	Ivory.....	183	Silver.....	1,047
Woman's milk.....	102	Beech.....	85	Sulphur.....	203	Lead.....	1,135
Cow's ".....	103	Mahogany.....	106	Marble.....	270	Mercury.....	1,357
Goat's ".....	104	Oak.....	117	Chalk.....	279	Gold.....	1,926
Porter.....	104	Ebony.....	133	Glass.....	289	Platina.....	2,150

The weight of a cubic foot of distilled water at a temperature of 60° F. is 1,000 ounces Avoirdupois, very nearly, therefore the weight (in ounces, Avoirdupois) of a cubic foot of any of the substances in the above table is found by multiplying the specific gravities by 10, thus:—one cubic foot of oak weighs 1,170 ounces; one cubic foot of marble 2,700 ounces, and so on.

Agrostis, (*Agrostis stolonifera* and *A. canina*). White or Dutch clover is often sown with Kentucky blue grass. There are also several of the fine-leaved fescues, which are valuable lawn grasses in the regions where the Kentucky blue grass may be grown. Canadian blue grass is a native, and when properly handled makes a beautiful, rich, bluish greensward. It is especially valuable for holding terraces. Crested dog-tail grass is soft and fine-leaved and has been sparingly cultivated in this country.

A rich emerald green is the shade most desirable in a lawn grass, and no grass of the Northern and Middle States meets this requirement as well as does the Kentucky blue grass. Some of the fescues possess an equally deep shade of green, but the best turf-forming varieties of this class have a grayish tint which is more or less objectionable. Creeping bent and Rhode Island bent are much alike in color, considerably lighter than the Kentucky blue grass but of finer texture. Some of the varieties of fescues have exceedingly narrow, or thread-

Gray, Asa.—A distinguished American botanist, born in 1810, and died in 1888. In 1812, he became Fisher Professor of Natural History at Harvard University, a post which he held continuously until 1874, when he succeeded Agassiz as regent of the Smithsonian Institution at Washington. The last 15 years of his life he passed in study and scientific investigation at Cambridge. He was an active Darwinian and correspondent and friend of the author of "The Origin of Species," though holding stoutly to his theistic beliefs. He wrote many valuable manuals on botany and on the "Genera of the Plants of the United States." Among his other works are: "How Plants Grow," "Lessons on Botany," and "Structural and Systematic Botany," and on "The Synoptical Flora of North America."

Gray, Elisha.—Born at Barnesville, Ohio, 1835. An inventor noted for his improvements in telegraphy and telephony. A long litigation between him and Alexander Graham Bell, relative to priority of right in the invention of the tele-

phone, was decided by the U. S. Supreme Court in favor of Bell.

Gray, Henry Peters.—Born at New York, 1819; died there, 1877. An eminent painter. He was president of the National Academy (1869-71). His most noted productions are "Greek Lovers" and "The Apple of Discord."

Gray, Thomas.—(1716-1771.) An English poet, best known as the writer of the "Elegy Written in a Country Churchyard" (1751).

Gray's Peak.—Situated in Col. It is one of the highest summits of the Rocky Mountains.

Great Auk, The.—See AUK, 2602.

Great Basin.—An elevated plateau between the Sierra Nevada and Wahsatch Mountains. The drainage of the greater part of it is into Great Salt Lake and other interior lakes, which have no connection with the sea.

Great Bear.—Ursa Major, 2995.

Great Bear Lake.—A lake in northwest Canada. It is 150 miles long and is drained into the Mackenzie River.

GREAT BRITAIN,

Or to give it its official name since Jan. 1, 1801, the "United Kingdom of Great Britain and Ireland," comprises England, Scotland, Ireland, Wales, and the small neighboring islands. The empire of which the British Isles is the nucleus and center includes imperial India, the great colonies such as Canada, Australasia, Cape Colony, and many other possessions in Africa, numberless islands in many seas, such as Bermuda, the Bahamas, Ceylon, Cyprus, Jamaica, Malta, Newfoundland, New Zealand, St. Helena, Zanzibar, etc., together with other possessions, protectorates, and settlements in almost every country and clime. The area of the United Kingdom and Ireland is, roughly speaking, 121,000 square miles, or only a little more than one-thirtieth of the area of continental Europe. The extreme length of the main island (England, Wales, and Scotland) is 610 miles, that is, from Dunnet Head to Lizard Point; the total length of Ireland is 306 miles. The entire coast-line has a length of 4,300 miles. Great Britain holds the first rank among the commercial nations of the world for both home and foreign trade, though she has now a formidable rival in the United States. She is the world's carrier, the estimated tonnage of vessels of different nations entering and clearing from British ports in 1899 being over 65 million tons. The trade of the United Kingdom, which in 1801 (imports and exports) was 67 millions sterling, rose in 1901 to 877 million pounds sterling. Her population, during the same period, rose from under 16 millions to 41½ millions, despite the constant outflow of emigrants. That of her colonies and dependencies (which have 90 times the area of the United Kingdom) is today reckoned at 354 millions. The national revenue of the kingdom has risen from 37½ million pounds stg. in 1801 to 115 millions in 1901. The aggregate wealth of the kingdom has advanced within the 19th century from 11 to over

60 billion dollars, and since 1870 has increased at the rate of 2¼ million dollars a day.

The government of the nation is a constitutional monarchy, in which the sovereign (today, King Edward VII.) alone represents the supreme executive, and the king jointly with Parliament is the supreme legislative power. Parliament comprises the sovereign, the House of Lords, and the House of Commons; an act, to have the force of law, must have passed all three. The national revenue, which is derived from excise and customs duties, from income and property tax, from estate duties, stamps on deeds, and from the post-office and telegraphic service, was, for the financial year 1900-01, close upon 115 million pounds sterling, though the expenditure for the same period was over 53 million pounds in excess, owing mainly to the cost of maintaining the Boer War. The assets of the nation, it is, on the other hand, estimated, are sufficient to pay all its liabilities ten or eleven times over.

THE ORIGIN OF THE ENGLISH PEOPLE.—The original inhabitants of Britain were mainly of Keltic origin; their language being still spoken by many of the Welsh, Irish, and Highland Scotch of the present day. They were a warlike people, and their bravery was well shown in the defense of their country against the Roman invaders, the Picts and Scots being specially successful in their harassing attacks upon the Romans, driving them finally from the island in A.D. 410. After they left the country, the Britons, being then unfitted for self-government, fell back into their savage ways, and their country became a prey to the pirate Saxons of the Northern Sea. The Saxon tribes that first secured a foothold in the country were under the leadership of Hengist and Horsa. They came from Jutland, the peninsula of Denmark, and with their wives and families settled in Kent about the year 451. Later on these Jutes, as they were called, were followed by the two other branches of the same family, the Saxons and the Angles—the common home of all being the low-lying lands around the Baltic and the North Sea. The Saxons founded settlements in Sussex and Wessex; while the Angles took the land on the east coast, from the Thames to the Firth of Forth. All these tribes—Jutes, Saxons, and Angles—were afterward known as the English. As time passed, these settlements grew into kingdoms, each striving for sovereignty. These were named Kent, Sussex, Wessex, Essex, Northumbria, East Anglia, and Mercia. At the close of the 8th century three of the kingdoms had absorbed the others; and by the year 827 A.D., after much war and bloodshed, the supremacy passed to the kingdom of Wessex, and what is called the Saxon Heptarchy came to an end. This happened in the reign of Egbert, in whose day the country became known as England, the land of the Angles, the most numerous of the Saxon tribes. To this period belongs the legendary King Arthur, of whom the late poet-

Great Britain.—*Continued*

laureate, Tennyson, has written in the "Idylls of the King."

The following is an epitome, in brief, of England's subsequent history:—

Introduction of Christianity among the English.....	A.D. 597
The Norse sea-kings, under their Vikings or chiefs, ravage England.....	.....8th and 9th Cent.
King Alfred the Great routs the Danes or Norsemen.....	(ruled) 871-901
A Dane now comes to the English throne—King Canute.....	(ruled) 1017-1035
Danish and Norman rivalry for the English Crown.....	1066
William the Conqueror wins the battle of Hastings (Senlac) and the Crown.....	(Christmas Day) 1066
Succession of William Rufus and his brother Henry I.....	(ruled) 1087-1135
Reign of Stephen of Blois and Feudal oppression.....	(ruled) 1135-1154
The first of the Angevin or Plantagenet kings—Succession of Henry II.	1154-1189
Conquest of Ireland.....	1171
Era of the Crusades—Richard I (Cœur de Lion).....	1189-1199
Era of King John and the Great Charter.....	1199-1216
The Baron's War and the First Parliament (Henry III.).....	1264
Conquest of Wales and Scotland, Reign of Edward I.....	1272-1307
Edward II. and the Ordainers—Fight for Scottish Independence.....	1307-1327
Edward III. and the beginning of the 100 Years' War with France.....	1327-1377
Richard and the Peasants' War—Age of Wyckliffe and Chaucer.....	1377-1399
Henry IV. (Bolingbroke), first of the Lancastrian kings.....	1399-1413
Henry V. and the Conquest of France. Persecution of Lollards.....	1413-1422
Henry VI. and the Loss of France: England distracted by Wars of the Roses.....	1422-1461
The fight for the Crown. Edward IV. (of York).....	1461-1483
The New Monarchy. Edward V., Brief rule of.....	(Apr. to June) 1483
Richard III. and the Battle of Bosworth (1485).....	1483-1485
The first of the Tudors. Era of Henry VII.....	1485-1509
Henry VIII. and the Great anti-Papal Revolt.....	1509-1547
The Reformation under Edward VI. Prayer-Book of King Edward.....	1547-1553
The Catholic revival under Mary Tudor.....	1553-1558
The Renowned Age of Elizabeth—the Fight for Religion. The Armada..	1558-1603
James I. and Stuart Rule, and the struggle between Crown and Parliament.....	1603-1625

Charles I. and a defiant House of Commons.....	1625-1649
Cromwell and the "Great Rebellion." The Commonwealth.....	1649-1660
England and a Royalist Reaction. Rule of Charles II.....	1660-1685
Freedom's Battle won. The cruel and arbitrary James II.....	1685-1688
The Revolution. Change in the Character of the Monarchy. William III.....	1689-1702
Queen Anne and the contest for "Balance of Power".....	1702-1714
England in the 18th century comes under the Georges and Whig Rule.	1714-1727
George II. and the ministries of Walpole and Pitt.....	1727-1760
The Crown and the Colonies: George III. and the effects of Regal Power	1760-1820
Revolt and Loss of the American Colonies.....	1775-1783
The Struggle against Napoleon. The French Revolution (1789-1795).	1799-1815
Trafalgar, Austerlitz, and Jena (1805-06). The Peninsular War.....	1808-1814
George IV. and the Era of Parliamentary Reform.....	1820-1830
William IV., the First Reform Bill and Abolition of Slavery.....	1830-1837
Victoria and the Age of Progress and Colonial Expansion.....	1837-1901
Growth of Democracy, Extensions of the Franchise, The Crimean War, The Indian Mutiny, Disestablishment of the Irish Church.	

Great Commoner.—A name given to William Pitt (afterward Earl of Chatham), on account of being a member of the House of Commons and not of the House of Lords.

"Great Eastern," The.—The largest ship ever built, the "Great Eastern," recently broken to pieces and sold to junk dealers, was designed and constructed by Scott Russell at Millwall on the Thames. Work on the giant vessel was commenced in May, 1854. She was successfully launched January 13, 1858. The launching alone occupied the time from November 3, 1857, until the date above given. Her total length was 692 feet; breadth, 83 feet; total weight when launched, 12,000 tons. Her first trip of any consequence was made to New York in 1859-60.

Great Falls.—A city in Mont., on the Missouri River, the center of a large manufacturing and trading district. Pop. (1900), 14,930.

Great Flowered Magnolia, The.—2814.

Great Head.—A noted promontory in the eastern part of Mount Desert, Me.

Great Lakes.—Five large bodies of fresh water on the northern line of the U. S. They are Superior, Michigan, Huron, Erie, and Ontario. Lake Superior is the largest sheet of fresh water in the world; elevation above sea-level, 600 feet; length, 370 miles; area, 32,000 sq. miles. Lake Michigan is 340 miles long and has a mean

depth of 870 feet; elevation above sea-level, 582 feet and area, 22,000 sq. miles. Lake Huron has a length of 270 miles; depth from 300 to 1,800 feet; elevation above sea-level, 581 feet; area, about 23,800 sq. miles. Lake Erie is the southernmost and shallowest of the lakes and is about 250 miles long; elevation above sea-level, 573 feet; area, 9,600 sq. miles. Lake Ontario is the smallest and easternmost of the lakes, and is 190 miles long; elevation above sea-level, 234 feet; area, 7,500 sq. miles.

Great Laurel, The.—2891.

Greatorex, Henry Wellington.—Born in England, 1816; died at Charleston, S. C., 1858. An eminent musician. He emigrated to the U. S. in 1839 and became distinguished by his efforts to advance the standard of church music.

Greatorex, Mrs. (ELIZA PRATT).—Born in Ireland, 1820; died, 1897. An Irish-American artist; she came to New York in 1840 and married Henry Wellington Greatorex in 1849. She became an associate of the National Academy in 1868.

Great Salt Lake.—Situated in Utah and noted for its saltiness. It is 4,200 feet above the sea-level; length, 75 miles, greatest width, about 30 miles; area, about 2,360 sq. miles.

Great Willow Herb, The.—2897.

Greece.—A kingdom lying to the south of Turkey with the Ægean and Ionian seas to the east, south, and west. The government is a hereditary constitutional monarchy, with a chamber of deputies comprising 207 members. The prevailing religion is that of the Greek Church. Area, 25,041 sq. miles; pop., 2,434,000.

Greek and Roman Mythology.—1603.

Jupiter, 1604.	Vesta, 1617.
Juno, 1606.	Bacchus, 1618.
Minerva, 1607.	Pluto, 1620.
Apollo, 1608.	Pan, 1622.
Diana, 1611.	Janus, 1622.
Venus, 1612.	Hercules, 1623.
Ceres, 1613.	Jason, 1626.
Vulcan, 1614.	Theseus, 1627.
Mercury, 1615.	Perseus, 1628.
Mars, 1616.	Bellerophon, 1629.
Neptune, 1616.	Atalanta, 1630.

Greek Fairy Tales.—1251.

Greely, Adolphus Washington.—American Arctic explorer and for a time chief of the U. S. Signal Service and in charge of the meteorological records at Washington, with the rank of brigadier-general. He was born at Newburyport, Mass., in 1844, and served as a volunteer in the Civil War. In 1881, he was appointed to command an expedition, sent out by the U. S. government, to the Arctic regions to establish posts of scientific and meteorological observation. This he did in the "Proteus," which left St. John's, Newfoundland on July 7, 1881. Reaching Discovery Harbor on Aug. 12, here Greely established his chief station. Two of his party, Lieut. Lockwood and Sergt. Brainerd, with a detachment of the expedition penetrated as far north as lat. 83° 24½, long. 40° 56½ W., the highest latitude heretofore attained. Compelled by the failure of expeditions to reach him, Greely

began a retreat southward in Aug. 1883 and in the following June he and six survivors of his party were rescued by Commander Winfield Schley, having lost 18 of his men.

Greely Expedition.—Lieut. Charles Weyprecht, of the Austrian navy, who discovered Franz Josef Land, conceived the idea of establishing a series of circumpolar stations from which simultaneous investigations of ocean-currents, the origin and progress of storms and other polar phenomena might be made. Scientific men throughout this country and Europe indorsed this plan. It could only be carried out by the united action of the civilized nations and in May, 1881, it was announced that eight stations had been pledged by various governments, two of which were to be supported by the U. S. Lieut. A. W. Greely was chosen by the U. S. government to command the expedition of 24 men which was to establish a station on Lady Franklin Bay. They sailed from St. John's, Newfoundland, July 7, 1881, in the steamship "Proteus," which was to take them to their destination and return. Stores for two years were carried. Aug. 12, they landed on the shore of Discovery Harbor, Lady Franklin Bay, and Aug. 18, the "Proteus" left Greely and his party from whom the civilized world heard nothing more until three years later, when the survivors were rescued by a relief expedition under the command of Commander (now Rear-admiral) Winfield Scott Schley, U. S. N. It was understood before Greely sailed that fresh supplies and recruits were to be sent to him every year. The two expeditions sent for this purpose both failed in reaching him. The second one sailed in the "Proteus," the vessel which had carried Greely two years before. She was crushed by the ice and sank, the party returning in the supply ship "Yantic." This failure caused decided alarm for the safety of the Greely party, and Congress voted ample funds to enable the Navy Dept. to fit out a third expedition, which cost upward of \$1,000,000. The expedition, under the command of Commander Schley, and consisting of the "Bear," "Thetis," and "Alert,"—the last presented by the British Government,—and the collier "Loch Garry," sailed in Apr., 1884. June 22, 1884, the "Thetis" and "Bear" rescued Lieut. Greely and six survivors of his party, from Cape Sabine in Smith's Sound. (See SCHLEY, WINFIELD SCOTT, 505.)

Greely, Horace.—Journalist and politician; sketch of, 238.

Green, Anna Katherine.—The maiden name and literary pseudonym of Mrs. Rohlf, an American novelist, born in 1846.

Green, Ashbel.—Born at Hanover, N. J., 1762; died at Philadelphia, 1848; president of Princeton College, 1812-22.

Green, Horace.—Born at Chittenden, Vt., 1802; died at Sing Sing, N. Y., 1866. A noted physician, author of works on diseases of the throat and air-passages.

Green, Jacob.—Born at Philadelphia, 1790; died there, 1841. A noted American scientist, son of Ash-

bel Green and author of "Chemical Philosophy."

Green, John Richard.—An eminent English historian, was born at Oxford in 1837, and died at Menton, France, in 1883. His chief published works include his popular "Short History of the English People," a larger work (in 4 vols.) entitled "History of the English People," a masterly work on "The Making of England," and on "The Conquest of England," and a collection of essays entitled "Stray Studies." He was the first historian of note to make a specialty of the social institutions of England and to trace the rise of the common people, in contradistinction to those writers who deal exclusively with the political aspects and development of the nation and of the work of its chief political leaders.

Green, Norvin.—Born at New Albany, Ind., 1818; died at Louisville, Ky., 1893. A noted financier. About 1854 he became president of the Southwestern Telegraph Co., and subsequently vice-president of the American Telegraph Co., and of the Western Union Telegraph Co. From 1869 to 1873 he was president of the Louisville, Cincinnati, and Lexington Railroad.

Green, Seth.—Born at Irondequoit, N. Y., 1817; died at Rochester, N. Y., 1888. An eminent pisciculturist. He introduced improved methods of breeding fish and stocked several rivers in Conn. and Cal. with shad and other species. He was appointed a member of the New York Fish Commission in 1868 and superintendent in 1870. He was the author of "Trout Culture" and "Fish-Hatching and Fish-Catching."

Green, William Henry.—Born near Trenton, N. J., 1825; died at Princeton, N. J., 1900. He was professor of biblical and Oriental literature at Princeton in 1851, and chairman of the American Old Testament Revision committee, and of the English and American Bible Revision committees. He was author of "A Grammar of the Hebrew Language," "Moses and the Prophets," "The Jewish Feasts," etc.

Green Ash, The.—2823.

Greenaway, Kate.—A well-known English artist and illustrator of children's books and child life. Receiving her artistic education at the Art School, Kensington, London, and at the Slade School of Art, she early studied Reynolds and Romney and designed from old plates and sketches in books of costumes until she evolved those delightful child types which have since become of world-wide repute. As a book illustrator she is known by her "Kate Greenaway's Alphabet," "Mavor's Spelling Book," "Little Ann," "Mother Goose," "Marigold Garden," "Under the Window," "The Language of Flowers," "The Pied Piper of Hamelin," "A Day in a Child's Life," "Birthday Book," and "A Painting Book for Boys and Girls." Many of her paintings were favorites of Mr. Ruskin, the well-known art-critic, and in his possession. She died in Nov., 1901.

Greenback Party.—Opposition to the resumption of specie payment caused a political party to be

organized at Indianapolis, Ind., Nov. 25, 1874, called the Greenback party. The platform adopted advocated the withdrawal of all national and State Bank currency and the substitution thereof of paper currency or greenbacks, which should be exchangeable for interconvertible bonds bearing interest sufficiently high to keep them at par with gold, and that coin should only be used in payment of interest on the national debt. In 1876 the Greenback party nominated Peter Cooper, of N. Y., for President. He received 81,740 votes, mostly from the Western States. In 1878 the Greenback party united with the Labor Reform party, the two forming the Greenback-Labor party. The new party in their platform adopted at Toledo, Feb. 22, 1878, reiterated the demands of the original Greenback party, and in addition declared for an 8-hour law, prohibition of Chinese immigration and against grants of land to railroads and special grants to corporations. Fourteen members of Congress were elected on this platform. June 9, 1880, at their national convention held in Chicago, they nominated Gen. James B. Weaver, of Iowa, for President, and B. J. Chambers, of Texas, for Vice-president. Their popular vote reached 307,740. In 1884, with Gen. B. F. Butler as their candidate, they polled only 133,825 votes.

Greenbacks.—The popular name for the legal tender Treasury notes, printed on one side in green ink, issued by the government during the Civil War. The right of the government to issue bills of credit was disputed by many statesmen and financiers, but the exigencies of the time seemed to render some such measure necessary, and the Supreme Court finally established their validity. Issues of \$150,000,000 each were authorized by the laws of Feb. 25 and July 11, 1862, and Mar. 3, 1863. The result was that, as compared with greenbacks, gold was held at an average of 220 throughout 1864 and at one time, actually rose to a premium of 285, and did not again touch par with greenbacks till Dec. 17, 1878, nearly 17 years after the last previous sale of gold at par. By the specie-resumption act of Jan. 14, 1875, it was ordered that on and after Jan. 1, 1879, all legal tender notes presented to the assistant treasurer of the U. S. at his office in N. Y., should be redeemed in coin. The term "Greenback" has been applied to other forms of U. S. securities printed in green ink.

Green Bay.—A lake port in Wis., on Fox River, noted for its lumber trade. Pop. (1900), 18,684.

Greencastle.—A city in Indiana, the seat of De Pauw University (Methodist Episc.). Pop. (1900), 3,661.

Greene, Charles Gordon.—Born at Boscawen, N. H., 1804; died at Boston, 1886. A noted American journalist. He was founder of the Boston "Morning Post" in 1831, which became the prominent organ of the Democratic party.

Greene, George Washington.—Born at East Greenwich, R. I., 1811; died there, 1883. He was grandson of Nathanael Greene and author of "Historical View of the American Revolution" and "Life of Nathanael Greene."

- Greene, Nathanael.**—Born at Warwick, R. I., 1742; died near Savannah, Ga., 1786. An American general, distinguished in the Revolutionary War. He fought at Trenton, Princeton, Brandywine, etc.; succeeded Gates in the command of the Southern army (1780), conducted the retreat from Catawba to the Dan (1781), and commanded at Eutaw Springs (1781).
- Greene, Nathaniel.**—Born at Boscowen, N. H., 1797; died at Boston, 1877: brother of Charles Gordon Greene. He was the founder of the "Statesman" in Boston, of which city he was postmaster from 1829 to 1840 and again from 1845-49. He was the translator of several French, German, and Italian works.
- Greenland.**—An immense peninsula or island in the North Polar sea, lying to the northeast of Labrador, supposed to have been first discovered by Norsemen about the year 900 A.D. It is bounded on the west by Davis Strait and Baffin Bay, and on the east by the Arctic and N. Atlantic Oceans. The area is roughly estimated at 512,000 square miles, with a population (mostly Eskimos) of about 11,000. The inhabited parts of Greenland, a region with an area of 46,740 sq. miles, together with Iceland, belong to Denmark, which may be said to have the monopoly of the trade. This trade is chiefly in seals, of which about 90,000 are taken every year; there is also considerable whale and halibut fishing on the coasts, which with bears, sea-birds, hares, and foxes, furnish the natives with food. Of animals, the Greenlanders have now only the dog, which is used *entrain* to draw sledges in passing over the traveled portions of the country, as reindeer are now scarce. The country is for the most part a wilderness of snow and ice, rising in places into mountains from 2,000 to 4,000 feet in height, great masses of which slide down into the fjords, where lifted up by the sea they form huge icebergs. Parts of the coast have frowning desolate cliffs of about 5,000 feet in height. What vegetation there is is stunted and of little value. For fuel the people have to depend upon drift-wood, turf, and train-oil. Greenland, in spite of its desolateness, has attracted many explorers, such as Kane, Hall, Nares, Peary, Greely, and Nansen.
- Greenleaf, Benjamin.**—Born at Haverhill, Mass., 1786; died at Bradford, Mass., 1864. He was the author of a series of mathematical works.
- Greenleaf, Simon.**—Born at Newburyport, Mass., 1783; died at Cambridge, Mass., 1853. A noted jurist. He became reporter of the Maine supreme court in 1820, and Dane professor of law at Harvard in 1846. He wrote a "Treatise on the Law of Evidence."
- Green Mountain Boys.**—A sobriquet applied to soldiers from Vt. in the Revolutionary War, who were organized and commanded by Ethan Allen in 1775.
- Green Mountains.**—The highest peak of Mount Desert, Me., height 1,527 feet.
- Green Mountains.**—A part of the Appalachian system running through Vt., of which the highest elevation is Killington Peak, 4,240 feet in height.
- Green Mountain State.**—An epithet of Vt. which is traversed by the Green Mountains.
- Greenough, Horatio.**—Born at Boston, 1805; died at Somerville near Boston, 1852. A noted American sculptor. His chief productions are "A Statue of Washington" (near the Capitol, Washington), "The Rescue," "Venus Victrix," etc.
- Greenough, Richard S.**—Born at Jamaica Plain, Boston, 1819 (brother of Horatio Greenough), noted as a sculptor.
- Green Snake, The.**—See SERPENTS, 2639.
- Greenville.**—A city in S. C., the seat of several Baptist educational institutions. Pop. (1900), 11,860.
- Greenwich.**—A borough of Kent, England, on the Thames, close to London, noted as the seat of the Royal Observatory from which the meridians of longitude are reckoned for Great Britain. It is also noted as the former home for disabled or aged sailors, established in 1694. Of late years Greenwich Hospital has, however, been used as a royal naval college and a free school for 1,000 sons of sailors. The town has a pleasant appearance as well as an interesting history, and is largely visited by Londoners and tourists. Population of borough (1901), 96,770.
- Greenwich Observatory.**—The Royal Observatory of England, situated in Greenwich Park, near London, was founded in 1675.
- Greenwood Cemetery.**—Situated in Brooklyn, N. Y. It is about 400 acres in area and is ornamented with forest trees. It was opened for interments in 1840.
- Gregg, David McMurtrie.**—Born at Huntingdon, Pa., 1833. A cavalry officer in the U. S. army. He was a graduate of West Point; at the beginning of the civil war he was made colonel of the 8th Pa. cavalry and in 1862 was promoted to brig.-gen.; served through the war in the Army of the Potomac; commanded a cavalry division at Gettysburg, and in Sheridan's cavalry corps during the campaigns of 1864-65.
- Gregg, John Irvin.**—Born, 1826; died, 1892. A U. S. cavalry officer. In the Mexican War he volunteered as a private and gained the rank of captain; entered the service in the Civil War as colonel of the 6th Pa. cavalry and later was made a brig.-gen.; his service was in the Army of the Potomac; was commissioned colonel of the 8th U. S. Cavalry in 1866, served in the West and was retired in 1879.
- Gregg, Maxcy.**—Born at Columbia, S. C., 1814; killed at the battle of Fredericksburg in 1862. He was a brig.-gen. in the Confederate service.
- Gregory I., Saint.**—"The Great" (540-604), was Pope (590-604). In 597 he sent Saint Augustine to Britain to convert the people of that country.
- Grenada.**—One of the group of the Windward Islands, which form the eastern barrier to the Caribbean Sea, in the West Indies. It is the largest group and belongs to Great Britain; its area is 133 square miles, with a population of 64,098. The island was settled by the French in 1651, taken by the British in 1762, and again occupied by the French during the years 1779-83. The capital is St. George, the seat of the

governor of the Windward Islands and his administration, an executive council of six and a legislative council of thirteen, seven of the number being nominated by the Crown. The chief products are cocoa, coffee, sugar, fruits, cotton, and spices.

Gresham, Walter Quinton.—Born at Lanesville, Ind., 1832; died at Washington, D. C., 1895. Distinguished as a politician, a jurist, and a general. He served as a division-commander in Blair's corps before Atlanta, and became maj.-gen. of volunteers in 1865. During 1869-82, he was U. S. judge for the district of Ind., postmaster-general (1882-84), became Secretary of the Treasury in 1884, and Secretary of State under Cleveland in 1893.

Gretna Green.—A small village 8 miles north of Carlisle, and just over the border between England and Scotland. It became notorious for the hasty marriages of runaway parties from England. A law passed in 1856 requires a residence in Scotland of one of the parties for some weeks prior to the marriage to render the contract valid.

Greuze, Jean Baptiste.—3456.

Grey, Lady Jane.—(1537-1554.) The great-granddaughter of Henry VI. of England. She was famous for her great learning. On the death of Edward VI., in July, 1553, she was proclaimed queen; but was arrested in Nov., and beheaded on a charge of high treason.

Gridley, Jeremiah.—Born at Boston, 1702; died at Brookline, Mass., 1767. A noted American lawyer, brother of Richard Gridley. He became attorney-general of the province of Massachusetts Bay. When before the superior court of judicature, he defended against James Otis the legality of the writs of assistance demanded by the British custom-house officials.

Gridley, Richard.—Born in Mass., 1711; died at Stoughton, Mass., 1796. A distinguished American general in the Revolutionary War, on the outbreak of which he became chief engineer and commander of artillery in the colonial army at Cambridge and planned the works at Bunker's Hill. He was appointed maj.-gen. by the provincial Congress in 1775 and had command of the Continental artillery.

GRIEG

EDVARD HAGERUP GRIEG is the foremost and representative musician of the Scandinavian countries, and one of the most interesting composers of the present day. He was born at Bergen, Norway, in 1843. At the age of six he received instruction on the piano from his mother, an exceptionally gifted woman and a skilful pianist.

At the age of fifteen, he accompanied his father on a journey through Norway, and so deeply did the grandeur and beauty of the scenery impress him that he determined to devote his life to art. Grieg has been more fortunate than many of his predecessors in the field of music, in winning fame and appreciation during his lifetime. His countrymen are proud of him, and since 1874 the Norwegian government has granted him an annual pension of 1,600 crowns, which, with the income derived from his works, has enabled him to devote all his time and strength to composition.

Grieg has found a wider acceptance beyond the borders of his native Norway than any Scandinavian composer before him. He brought into the music of the world a "characteristic note" and created a tone atmosphere. His employment or imitation of national themes and folksongs imparts to his music a peculiar charm, at once poetic and picturesque. Not only does he employ the form of the Scandinavian folksong, but he is thoroughly imbued with its spirit. His harmonies are bold and daring, and his fund of melody as inexhaustible as Schubert's. The most marked characteristic of his music is its brilliant and effective local color. The life of the people, the rugged grandeur of the scenery; the weird mystery, the grotesque humor, and the tender grace of the elves and gnomes with which the legends of the country have peopled the mountains,—all are reproduced in Grieg's music. He has been called the "musician of elves and gnomes."

Grieg is intensely national in feeling, a patriot and a humanitarian. He has been called "the soul of a nation," and Von Bulow named him "the Chopin of the North," for his compositions express to his countrymen the free, loyal, glowing spirit of the North, as Chopin's music tells of the sorrows of Poland.

- Grierson, Benjamin Henry.**—Born at Pittsburg, Pa., 1826. A cavalry officer of the U. S. army. He was major and later colonel of the 6th Ill. cavalry and reached the rank of maj.-gen.; served chiefly in Miss. and Tenn., and was a dashing and efficient leader; his long raiding expeditions were noted for the energy and endurance displayed; after the war he was made colonel of the 10th U. S. Cavalry, and served in the West.
- Grierson's Raid.**—A famous cavalry expedition of the Civil War. Col. Benjamin H. Grierson, with three cavalry regiments—6th Ill., 7th Ill., and 2d Iowa—swept from La Grange, Tenn., southward to Baton Rouge, La., cutting railroads, burning bridges, and destroying supply depots and manufactories. The command started April 17 and accomplished the trip in 15 days, reaching Baton Rouge May 2. Its total loss, killed, wounded, and missing, was but 24. It was one of the most successful raids of the war.
- Griffin, Charles.**—Born in Ohio, 1826; died at Galveston, Tex., 1867. An officer of the U. S. army. He was graduated from West Point and served in the war with Mexico and through the Civil War; commanded the West Point battery in the first battle of Bull Run, July, 1861; he served with conspicuous gallantry in the various campaigns of the Army of the Potomac, and in 1865 was in command of the 5th corps; he was designated by Gen. Grant to receive the arms and colors of Lee's army on its surrender at Appomattox; was colonel of the 35th U. S. Infantry at the time of his death.
- Griffin, Edward Dorr.**—Born at East Haddam, Conn., 1770; died at Newark, N. J., 1837. He was president of Williams College (Williamstown, Mass.), 1821-36, and author of "Lectures in Park Street Church."
- Griffis, William Elliot.**—Born at Philadelphia, 1843. In 1870 he went to Japan as organizer of schools on the American plan, was appointed superintendent of education in the province of Echizen in 1871, and professor of physics in the Imperial University of Tokio (1872-74); subsequently, on his return to America, he became pastor of a reform church in Schenectady, N. Y., and of the Congregational Church in Ithaca, N. Y.* He wrote "The Mikado's Empire."
- Grimaldi, Joseph.**—(1779-1837.) An English actor and pantomimist.
- Grimes, James Wilson.**—Born at Deering, N. H., 1816; died at Burlington, Iowa, 1872. He was elected governor of Iowa in 1854, and U. S. senator from Iowa, in 1859. He was one of the few Republicans who protested against the conviction of President Andrew Jackson.
- Grimké, Frederick.**—Born at Charleston, N. C., 1791; died in 1863. An eminent American jurist, and brother of T. S. Grimké. He was appointed a judge of the supreme court of Ohio in 1836, and was the author of "Nature and Tendencies of Free Institutions."
- Grimké, Sarah Moore.**—Born at Charleston, S. C., 1792; died, 1873; sister of T. S. Grimké, and noted as an Abolitionist. She was the author of "Letters on the Condition of Woman and the Equality of the Sexes."
- Grimké, Thomas Smith.**—Born at Charleston, S. C., 1786; died near Columbus, Ohio, 1834. A noted American lawyer and lecturer. He was elected a member of the state senate of S. C. in 1826, and became a prominent member of the American Peace Society and one of the pioneers in temperance reform. He was the author of "Addresses on Science, Education, and Literature."
- Grimm's Law.**—3009.
- Grinnell.**—A city in Iowa, seat of the Iowa Congregational College. Pop. (1900), 3,860.
- Grinnell, Henry.**—An American merchant, born in 1799 and died in 1874, who fitted out at his own expense, in 1850, an expedition sent in search of Sir John Franklin, the lost Arctic explorer. The two vessels of the expedition were under the command of Lieut. De Haven; but neither this expedition, nor one subsequently sent out under Dr. E. K. Kane, and also fitted out by Mr. Grinnell and Mr. George Peabody, was successful. In the earlier voyage, land was reached as far north as lat. 80°, which has since been known to geographers as "Grinnell Land." Mr. Grinnell also contributed to the expedition of Dr. Hayes and to Hall's "Polaris" expedition of 1871. The Franklin expedition sailed from England in 1845, and was last spoken off the entrance to Lancaster Sound in July of that year. Of the 39 relief expeditions sent out from England and America in search of Franklin, in the ten years between 1847-57, only one, that of Capt. McClintock, found traces of the missing explorers, and learned from an entry in the journal of one of the party that Franklin had died in June, 1847, having penetrated near to the northern extremity of King William's Land.
- Griqualand, East.**—A dependency of Cape Colony, in South Africa, governed by magistrates appointed by the Cape authorities. The capital is Kokstadt.
- Griqualand, West.**—A district of Cape Colony, west of the Orange River Colony. It is well known on account of its diamond fields. The capital is Kimberley.
- Griselda.**—A character of romance endowed with remarkable patience under suffering and trying ordeals as wife and mother.
- Griswold, Roger.**—Born at Lyme, Conn., 1762; died at Norwich, Conn., 1812. An American politician. He was elected a Federalist member of Congress from Conn. in 1795; appointed a judge of the Conn. supreme court in 1807, and governor of the state in 1811. During his governorship he refused, when requisitioned by the President, to supply four companies of troops for garrison purposes, on the ground that they were not wanted to repel invasion, and that the requisition was, therefore, unconstitutional.
- Griswold, Rufus Wilmot.**—Born at Benson, Vt., 1815; died at New York, 1857. He was editor of "Graham's Magazine" (1841-43), and of the "International Magazine" in 1852. His chief works are "Poets and Poetry of America," "Prose Writers of America," "Female Poets of America," "The Republican Court."

- Grizzly Bear, The.**— See BEAR, 2422.
- Grolier Club.**— Founded in New York, 1884, and incorporated, 1888, for the encouragement of book-making as an art.
- Gros, Antoine Jean.**—(1771-1835.) A French painter of historical subjects.
- Grosbeak, The.**—2576.
- Gross, Samuel D.**— Born near Easton, Pa., 1805; died at Philadelphia, 1884. A noted American surgeon. His chief works are "Elements of Pathological Anatomy," "System of Surgery."
- Gros Ventre Indians.**— Two separate tribes of wandering Indians. The Gros Ventres of the plains claim to have separated from the Arapahoes. After their separation they joined first one tribe and then another, and because of their treachery suffered many hostile attacks from their neighbors. In 1824 they settled with the Blackfeet near the Milk River. Their greatest chief was Sitting Squaw. Treaties were made with them 1851, 1853, 1855, 1865, and 1868. In 1870 they were joined by their kindred the Arapahoes, and are now (1901) occupying a portion of the Blackfeet reservation in Mont. They number about 1,500.
- Grote, George.**—(1794-1871.) An English historian. His great work is a "History of Greece."
- Groton.**—(1) A town in Conn., the site of Fort Griswold, the scene of a massacre of American troops by the British under Benedict Arnold in 1781; pop. (1900), 5,962.
(2) A town in Mass., the seat of Lawrence Academy; pop. (1900), 2,052.
- Grotta de Cane.**—A grotto near Naples. The carbonic-acid gas which collects in it is dangerous to life. The gas being heavy lies near the ground; above the air is pure. A dog breathes the carbonic acid gas and soon becomes unconscious, while men being taller breathe only air. Hence the name which means "grotto of the dog."
- Grouchy** (*grō-shē'*), Marquis Emmanuel de.—(1766-1847.) A marshal of France, who won distinction during the wars of Napoleon.
- Ground Squirrel, or Chipmunk.**— 2446.
- Grouse, The.**— 2511.
- Grove, Sir William Robert.**— (1811-1896.) An English physicist, noted for the invention of the voltaic battery, known as "Grove's Battery."
- Groveton (Va.), Battle of.**— See MANASSAS, BATTLE OF.
- Grundy, Felix.**— Born in Va., 1779; died at Nashville, Tenn., 1840. He was elected U. S. senator from Tenn. in 1829, and attorney-general (1830-40).
- Grundy, Mrs.**— A character in Morton's comedy "Speed the Plough," who is a rival of Mrs. Ashfield, who is constantly wondering "What will Mrs. Grundy say?" The phrase is proverbial for propriety, morality, and observance of the conventionalities.
- Guadalupe-Hidalgo, Treaty of.**— Named from the Mexican village where Nicholas P. Trist, on behalf of the U. S., Feb. 2, 1848, signed the treaty with Mexico terminating the war with that country and ceding to the U. S. the territory now comprising Nev., Utah, most of Ariz., a large part of N. Mex., parts of Col. and Wyo., and all of Cal. It fixed the Rio Grande as the boundary between Mexico and Tex. The U. S. agreed to pay Mexico \$15,000,000 and to assume the claims of its citizens against Mexico existing before the treaty. Mexicans in the ceded territory were allowed to remain, at their option, and were assured protection as citizens.
- Guadeloupe,** one of the Leeward group of the Lesser Antilles, is, with its five dependencies, consisting of the smaller islands of the region, the chief French possessions in the West Indies, together with the island of Martinique. Guadeloupe consists of two islands, Basse-Terre and Grande-Terre, separated by a narrow salt-water river. The colony is represented at Paris by a senator and two deputies, and has an area of 583 square miles, with a population of 167,000, including about 15,000 coolies. The chief town is Pointe-à-Pitre (pop., 17,242), with a fine harbor; but the seat of government is Basse-Terre (pop., 7,762). The chief products are sugar, rum, coffee, cacao, bananas, and cotton. There is valuable timber on the island, but it is as yet little worked.
- Guam.**—The largest in the Marianne or Ladronne group of islands, situated about 1,500 miles east of Luzon, in the Philippines, and 5,000 miles west of San Francisco. The island was taken by the U. S. cruiser, "Charleston" in June, 1898, and ceded by its former possessors, the Spanish. The area is about 160 square miles, with a population, chiefly Chamorros and other immigrants from the Philippines or their descendants, of 8,660. Agaña is the chief town, with a population of 5,250; it has an excellent roadstead and harbor. The island is subject to typhoons; it is densely wooded, well-watered, and fertile. The government has made the island a naval station and a coaling depot.
- Guano, The.**— See LLAMA, 2481.
- Guano.**— A valuable manure and land fertilizer, consisting of the fecal deposits or droppings of animals and birds, chiefly of sea-fowl, which owing to peculiar conditions has accumulated in great masses in certain regions of the globe. The richest and most important guano comes from the coasts of Bolivia and Peru, where sea-fowl congregate largely in the hot and arid districts, where there is little or no rainfall to wash away its rich nitrogenous matter. Phosphatic guanos, when washed with sulphuric acid to render them readily soluble, are largely used with beneficial effect on root crops.
- Guantanamo Bay, Cuba.**— Situated about 35 miles east of Santiago. Here, on June 10, 1898, was the first landing in force of United States troops in the war with Spain. The Spanish fort having been silenced by the fire of the U. S. cruisers and gunboats, a party of 600 marines landed and formed Camp McCalla (named after the commander of the "Marblehead"). On the 11th and 12th of June, the Spaniards opened fire on the troops in camp from the neighboring woods, where the latter assumed the defensive, assisted by the U. S. warships which shelled the woods,

- and on the 14th the Spanish were forced from their concealment and retreated to the town of Caimanera. From here they were subsequently driven out by the shells of the U. S. cruisers. (See SPANISH-AMERICAN WAR.)
- Guasimas, Las.**—A region in Cuba, about 3 miles from Siboney, noted in the Spanish-American War as the scene of an encounter (June 24, 1898) between General Young's brigade of dismounted cavalry and a Spanish force of about 2,800 men. The U. S. brigade consisted of a total of 965 men composed of the "Rough Riders" under Colonel Wood, the 1st U. S. Cavalry, and the 10th U. S. (colored) Cavalry. The result of the affair was to drive the Spaniards from their position in full flight toward Santiago. The feature of the engagement was the Rough Riders' charge up the hill occupied by the enemy under the gallant lead of Lieut.-Col. (now President) Roosevelt. The American loss was 16 killed and 49 wounded; the Spanish loss has not accurately been ascertained, though 39 Spaniards were found dead on the field, besides the wounded.
- Guatemala.**—The most northern republic of South America, governed under a constitution which dates from 1879, though subsequently modified. The executive is vested in a President and six heads of departments. It has an army of 7,000 officers and men, and a militia force of about 57,000 effectives. The soil is fertile, producing coffee, cocoa, tobacco, sugar, bananas, etc., while the Republic is a large exporter of hides and skins, and is beginning now to export rubber, with some minerals. The capital is Guatemala la Nueva, which is also the seat of government (pop., about 75,000). The area of the Republic is estimated at about 48,290 square miles, with a total population of 1,574,340, two-thirds of which are pure Indians or half-castes.
- Guayaquil** (*gwī-ā-kēl'*).—The most important town in Equador, in South America. It is situated on the Guayaquil River. Pop., 50,000.
- Guelfs, or Guelphs.**—The party which, composed of those who favored the papal authority and the people's cause, opposed the Ghibellines or representatives of the aristocracy in Italy in the Middle Ages.
- Guelf.**—A city in Ontario, Canada, on the river Speed, about 50 miles from Toronto. Pop. (1901), 11,496.
- Guericault, Theodore.**—French painter, 3458.
- Guernsey.**—One of the Channel Islands. Capital, St. Peter Port. Pop., 35,339.
- "Guerriere, The."**—A British frigate destroyed by the American frigate "Constitution," Aug. 19, 1812. (See "CONSTITUTION, THE.")
- Guiana.**—A division of South America on the north-east coast. It is divided into British, French, and Dutch Guiana. The capitals of these parts are Georgetown, Cayenne, and Paramaribo respectively.
- Guildhall.**—The council hall of the city of London.
- Guilford Court House (N. C.), Battle of.**—The American army, in the Revolutionary War, when ready for battle at Guilford Court House, N. C., Mar. 15, 1781, consisted of 4,404 men under command of Gen. Greene. More than half of the force consisted of raw militia. Cornwallis's army was about 2,200 strong. The conflict lasted two hours and the Americans were repulsed. The militia did not stand before the enemy's fire. The number of British killed and wounded was officially reported at 544. The total of the American casualties was 1,311.
- Guillotin** (*gē-yō-tan'*), **Joseph Ignace.**—(1738-1814.) A French physician, erroneously regarded as the inventor of the guillotine. He proposed decapitation as the means of capital punishment. The machine was the invention of a German mechanic, named Schmidt. Dr. Guillotin was not executed, as popularly believed, but died from natural causes.
- Guinea.**—A gold coin formerly current in England. It took its name from the gold which came from Guinea in West Africa. It was of 21 shillings value; coined first in the reign of Charles II. (1664) and was superseded by the sovereign, of 20 shillings, in 1817. Though it is no longer current, it is used as a measure of value.
- Guinea.**—An area lying along the western coast of Africa and extending indefinitely inland.
- Guinea, Gulf of.**—That portion of the Atlantic Ocean which washes the bend of the west coast of Africa, stretching from Cape Palmas to Cape Lopez.
- Guinea Fowl, The.**—2497.
- Guinevere** (*gwin'e-vēr*).—The wife of the mythical King Arthur, 1783.
- Guiteau, Charles Jules.**—Born about 1840; hanged at Washington, 1882; the assassin of President Garfield, July 2, 1881.
- Guizot, Francis Pierre Guillaume.**—(1787-1874.) A French statesman and historian.
- Gulf, Army of the.**—A grand division of the Union army during the Civil War, composing the troops operating in La., Tex., and southern Miss. and Ala., having its headquarters at New Orleans. It was commanded first by Gen. Benjamin F. Butler and then by Gen. Nathaniel P. Banks. Its principal battles were Baton Rouge, in 1862; Port Hudson in 1863; and the actions of the Red River campaign in 1864.
- Gulf of St. Lawrence.**—An arm of the Atlantic washing the eastern shore of Canada. It narrows to the estuary of the River St. Lawrence.
- Gulf Stream.**—A current of warm water from the equator which divides into two parts; one of which flows around the Gulf of Mexico and through Florida Straits where it is joined by the other which flows on the west coast of Cuba. Together they flow northeasterly at a velocity of from 2 to 5 miles an hour and cross the Atlantic. The warm water coming in contact with ice off Newfoundland causes the fogs, and it also exerts a modifying effect upon the climate of England.
- Gull, The.**—2605.
- Gum-boil.**—An abscess near the root of a tooth. Care must be taken to protect from cold until suppuration or the formation of matter occurs, when relief is to be given by lancing.

Gunnison Cañon.—A remarkable cañon in the Gunnison River, Col., 15 miles in length.

GUNPOWDER AND OTHER EXPLOSIVES.—

By explosives are meant substances that can be made to give off a large quantity of gas in an exceedingly short time, and the shorter the time required for the production of the gas the greater will be the violence of the explosion. Many substances that ordinarily have no explosive qualities may be made to act as explosives under certain circumstances. Water, for example, has caused very destructive boiler explosions when a quantity of it has been allowed to enter an empty boiler that had become red hot. Particles of dust in the air have occasioned explosions in saw mills, where the air always contains large quantities of dust. A flame introduced into air that is heavily laden with dust may cause a sudden burning of the particles near it, and from these the fire may be conveyed so rapidly to the others that the heat will cause the air to expand suddenly, and this, together with the formation of gases from the burning, will cause an explosion.

It must not be thought, however, that fine sawdust or water would ordinarily be classed as explosives. The term is generally applied only to those substances that may be very easily caused to explode.

The oldest, and most widely-known, explosive that we possess is gunpowder, the invention of which is generally credited to the Chinese. It is a mixture of *potassium nitrate*, or *saltpeter*, with powdered *charcoal*, and *sulphur*. The proportions in which these substances are mixed vary in different kinds of powder, but they usually do not differ much from the following:—

Sulphur.....	10 per cent
Charcoal.....	16 “ “
Saltpeter.....	74 “ “

The explosive quality of gunpowder is due to the fact that it will burn with great rapidity without contact with the air, and that in burning it liberates large volumes of gas. When a spark is introduced into it, the carbon, charcoal, and sulphur combine with a portion of the oxygen contained in the saltpeter to form *carbonic acid* gas and *sulphurous acid* gas, and at the same time the nitrogen contained in the saltpeter is set free in the gaseous form. This action takes place very suddenly, and the volume of gas set free is so much greater than that of the powder that an explosion follows.

In the manufacture of gunpowder all that is absolutely necessary is to mix the three ingredients thoroughly and in the proper proportions. But to fit the powder for use in firing small arms and cannon it is made into grains of various sizes, the small sizes being used for the small arms with short barrels, and the large sizes for cannon. The reason for this is that if the powder is made in very small grains it all burns at

once, and the explosion takes place so suddenly that an exceedingly strong gun is required to withstand the explosion, while if larger grains are employed the burning is slower and continues until the projectile has traveled to the muzzle of the gun. In this way the projectile is fired from the gun with as much force as if the explosion had taken place at once, but there is less strain on the gun.

Powder of this latter kind always produces a considerable quantity of smoke when it is fired, because there is a quantity of fine particles formed from the breaking up of the saltpeter and from some of the charcoal, which is not completely burned. This smoke forms a cloud that takes some time to clear away, which is a very objectionable feature. In order to get rid of it efforts were made to produce a substance that would explode without leaving any solid residue, and that could be used in guns. These efforts were finally successful, and there are now several brands of *smokeless powder* in use.

The most satisfactory forms of smokeless powder are all made from *guncotton* or *nitrocellulose*. This substance, which is made by treating cotton with a mixture of *nitric* and *sulphuric acids*, is a chemical compound, not a mixture like gunpowder; and when it is exploded it is all converted into gases, of which the chief ones are carbonic acid gas, nitrogen, and water vapor. To cause the explosion of guncotton it is not necessary to burn it, but a mere shock or jar will cause it to decompose with explosive violence. Of course such a violent explosive as this could not be used either in small arms or in cannon, but guncotton can be converted into less explosive forms which are suitable for use in guns, and the majority of smokeless powders are made in this way. The methods used in producing the smokeless powders are kept secret by the various countries that use them.

Another very powerful explosive, which is closely related to guncotton, is *nitro-glycerine*. This compound is made by treating *glycerine* with the same sort of acid mixture that is used in making guncotton. It explodes in the same way that guncotton does and yields the same products. It is an oily liquid of yellow color, and on account of its liquid form it is difficult to handle and use. The difficulty in handling nitro-glycerine led to the plan of mixing it with a quantity of very fine sand called *infusorial earth*. When mixed with this a solid mass called *dynamite* is formed, which is easier to handle and more difficult to explode, but which has almost as much explosive force as nitro-glycerine.

A more powerful explosive than either nitro-glycerine or guncotton is obtained by mixing them together. When this is done the guncotton swells up by absorbing the nitro-glycerine and becoming a brownish, jelly-like substance that is known as *blasting gelatin*. This is generally considered the most powerful explosive obtainable.

Gunpowder and Other Explosives.— *Continued*

Let us now consider for the moment what it is that makes guncotton, nitro-glycerine, and blasting gelatin explode so readily. The explanation is found in the presence in them of nitrogen. As you remember from what you learned about air, nitrogen is an extremely inactive element. It has no strong tendency to combine with other elements, and when it does enter into combination with them the compounds formed are almost always easily decomposed. In the compounds that have just been described a shock causes a loosening of the bonds that hold the nitrogen, and the whole compound goes to pieces just as an arch falls when the keystone is removed. See p. 2959.

Gunpowder Plot.— In 1605, certain of the Roman Catholics of England formed a conspiracy to destroy James I., the lords and commons, in the Parliament House, London. The leaders were Percy, Digby, Catesby, Winter, Guy Fawkes, and others. Fawkes was arrested and the conspiracy failed. The date set for firing the mine which was to effect the destruction was Nov. 5, 1605,— since called Guy Fawkes' Day.

Guns and Gunmaking.— Though the term "gun" is still applied to cannon and artillery, it more accurately embraces the variety of military small arms and sporting weapons. The improvements in military weapons from the era of the early arquebus, flint-lock, smooth-bore, muzzle-loading muskets down to that of the Enfield and Lee-Metford rifles, the Prussian needle-guns, the Mauser and the Krag-Jørgensen rifles, and the rapid-firing, breach-loading, and magazine guns, have been great. Greatly more effective have the latter also become by the use of the conical bullet, improved smokeless powder, and the spiral grooves wrought in the gun bores, which enable the ball to traverse the air with less resistance than the old spherical ball, to cover greater distance, and vastly increase its penetrating power. Rapid firing has been another gain in recent years, chiefly due to the invention of Hiram Maxim, by whose device the modern rifle and the machine gun is operated automatically. A death-dealing instrument is that perfected by Dr. Gatling in his machine gun, with its several barrels of rifle calibre, which can fire 450 rounds a minute, or with the Accles gun-feed attachment, can now fire 1,200 rounds a minute. Very destructive also is the Maxim pom-pom, or one-pounder automatic gun, and the same inventor's 9-pounder gun on much the same principle, which fire 60 rounds per minute. Like improvements have also been introduced, and with powerful effect, in heavy guns, such as those devised and constructed by Sir Wm. Armstrong in England, General Rodman in the United States, and Herr Krupp in Germany. The use of improved powder and high explosives has also greatly increased the effectiveness and precision of these destructive weapons.

Gunther.— See NIBELUNGENLIED, 1761.

Gurley, Ralph Randolph.— Born at Lebanon, Conn., 1797; died at Washington, D. C., 1872. He was agent after 1822 of the American Colonization Society.

Gustavus.— The name of several kings of Sweden, the more famous of whom were Gustavus Vasa, who reigned between the years 1523 and 1560, and Gustavus Adolphus, grandson of the above, who ruled from 1611 to 1632. The former took a prominent part in delivering Sweden from the Danish yoke, and after liberating his country he did much to advance and reform it. The latter was the first king of Sweden who played a great rôle in European history, and was the great hero of Protestantism in the Thirty Years' War (1618-48). His country was at the period of his coming to the throne the object of hostility by Denmark, Russia, and Poland. Successfully dealing with these Powers, he entered Germany in 1630 to do battle for Protestantism against the Catholic League. The German forces were then under Tilly and Wallenstein; the former Gustavus Adolphus twice defeated, besides taking the Palatinate and Mayence. At Lützen, near Leipsic, in Nov., 1632, he took the field against Wallenstein, but fell victorious in the battle. See the following:—

GUSTAVUS ADOLPHUS.—

(1594-1632.)

Gustavus Adolphus was the hero of Protestantism in the Thirty Years' War, and the first king of Sweden who played a great rôle in European history.

He was born at Stockholm in 1594, in the midst of his father's struggle for the throne. In his youth he received an excellent education, learning many foreign languages. At an early age he obtained experience in the affairs of government. At the age of five, he was taken by his father to see the fleet at Kalmar. When only ten, he was present at meetings of the council, and at the audiences given to foreign ambassadors.

From his father he received such advice as the following: "Before all things, honor thy father and mother, be tender to thy sisters, love those who have served me faithfully, reward them according to their deserts, be gracious to thy subjects, punish the evil, trust all men fairly, but only entirely when thou hast learnt to know them. Be no respecter of persons before the law; invade no man's own privileges, provided they clash not with the law; diminish not thy regal possessions in favor of any man, except thou art sure that he will recognize the benefit and do thee good service in return."

From officers who had been in the Low Countries, he often heard of the heroic deeds of the great Prince Maurice. In the early part of 1611, he was knighted and sent to collect troops for defense against Denmark. With his maiden sword in hand, he entered upon his military career with the Viking spirit of his race.

Later, in 1611, at the death of his father, he succeeded to the throne "with two empty

Gustavus Adolphus.—*Continued*

hands." He found himself surrounded by many difficulties. At home the finances were exhausted, the nobles discontented, and the spirit of the people declined. Abroad, there were several hostile enemies. He did not hesitate, nor shirk his duty, but went to work with skill and resolution.

His first task was to heal the disorders of fifty years which had existed in every department of the state. By his general manner and by respecting their privileges, he won the respect and good-will of the nobles, and induced them to bear their share of the taxes. He reformed the administration, made untiring efforts to advance the prosperity of the oppressed people, encouraged industry and education, aroused the national spirit, and gradually prepared Sweden to play a great part in Europe. In 1613, he made peace with Denmark.

In 1617, at the close of the war with Russia, he obtained a treaty by which Russia was prevented from planting herself on the Baltic coast in the provinces stretching from Finland to Livonia. With just pride he said to his Parliament: "Not the least of the benefits which God has granted Sweden is that Russia must forever give up the robbers' den from which she has so often molested us. She is a dangerous neighbor; her frontiers extend along the North and the Caspian Seas and approach the Black Sea; she has a powerful aristocracy, a superfluity of peasants, populous cities, and can send large armies into the field, but she cannot send any vessel into the Baltic Sea without our leave. We are separated from her by the great lakes of Ladoga and Peipus, thirty miles of marsh, and strong fortresses. Russia is shut from the Baltic, and I hope to God that the Muscovite will henceforth find it difficult to leap over this brook."

In 1620, Gustavus married the sister of the elector of Brandenburg. After an active struggle with Poland, in which he gained much excellent training, and made many conquests, he concluded a treaty of peace in 1629.

In 1630, feeling that his hands were free to oppose the advance of the imperial party, and to defend the Protestant German princes, he marched southward with an army of 15,000 brave and well-disciplined men to attack the strong armies of Austria. He excited the admiration of Europe by his methods and his success. He soon drove the imperialists out of Pomerania, advanced up the Oder, and stormed Frankfort. Finally, joining with the Saxon forces, he completely overthrew Tilly, who had led an army of desolating invasion into Saxony. Then marching westward toward the Rhine, he gathered around him the friendly Germans and drove out the imperial garrisons, and forced the passage of the Rhine against the Spaniards. Early the following spring he advanced into Bavaria.

In November, 1632, near Leipsic, he attacked the new army of Wallenstein which had in-

vaded Saxony. After one of the fiercest battles of history, finally resulting in victory for his forces, he was carried from the field of conflict and laid to rest at Stockholm. There in a marble sarcophagus in Riddarholms church, under the tattered banners which tell of his earthly triumphs, lies all that remains of the simple, brave, passionate, truthful, and devout Hero of Sweden.

He had such a moral power over Catholics as well as Protestants that even the Pope, on hearing of his death, said: "A hero, a perfect man, who wanted nothing for perfection but the true faith." Napoleon considered him the greatest general of all times, chiefly because during a dangerous and tedious campaign he advanced slowly, but surely, toward the center of Germany without suffering repulse of any importance.

The cause for which Gustavus Adolphus fought did not die with him, and the effects of what he did in two years were felt during the whole war. When peace was concluded, sixteen years later, the essential features of his plan were realized. Had he lived and given it a political aim or end, the war might have been closed much sooner; but the splendor of his name might have been less—for he died at the height of his fame.

Though he may have been too fond of war, and too ambitious, he was unselfishly devoted to his country, anxious to govern it justly and well, and willing to endure great privations and face serious danger in order to protect it from its enemies abroad. He was the most heroic and admirable character of the Thirty Years' War. He had the qualities and characteristics of a true hero. He could inspire men with enthusiasm, and kindle their minds for ideas which had been engulfed in the miseries of the times. He treated sacred things with no idle sport. He was in earnest in the religious worship and songs by which he restrained the terrible brute force of his army. He knew how to put an army on its legs and how to keep it on good behavior while in a foreign country. He had high and definite aims, a mental superiority, and a nobility of character which naturally placed him at the head of affairs.

Guthrie.—The capital of Oklahoma Territory, about 30 miles north of Oklahoma. Pop. (1900), 10,006.

Guthrie, James.—Born near Bardstown, Ky., 1792; died at Louisville, Ky., 1869. He was Secretary of the Treasury (1853-57).

Guyot, Arnold Henry.—(1807-1884.) The most eminent student of physical geography of the century.

Gwyn, Nell.—(1650-1687.) An English actress, and courtesan of Charles II. of England.

Gymnosperms.—Naked-seeded plants, such as the pine and other Coniferæ, in which the pollen comes into direct contact with the ovules.

Gypsum.—A widely-distributed mineral, composed essentially of sulphate of lime and water. Pure and crystallized gypsum is clear and transpar-

ent, but varieties are obtained of all shades of gray, red, brown, and black. Selenite includes all the transparent crystallized varieties, and of uncrystallized alabaster is the finest. It is rendered anhydrous by burning, and when calcined is known as Plaster of Paris. This calcined gypsum is used largely as a fertilizer. The production of the mineral in 1899 in this country was fully 425,000 short tons, valued at over a million dollars. France mines annually nearly 2,000,000

tons, while over 200,000 tons are raised each in Great Britain and in Canada. The chief producing states of the Union in which gypsum is found are Michigan, Kansas, Texas, New York, Iowa, and Ohio; it is also mined to some small extent in other states of the West—in California, Colorado, Arizona, Utah, So. Dakota, Oregon, Indian Territory, Oklahoma Territory, and also in Wyoming and Virginia. It has also been discovered in Florida.

H

Haarlem.—An ancient town of Holland.

Haas, Johannes Hubertus Leonardus de.—(1832-1880.) A noted animal painter.

Habberton, John.—Born, 1842. American writer; author of "Helen's Babies."

Habeas Corpus, Writ of.—A writ issued by courts of law or equity to compel the production of the body of a person alleged to be illegally detained and to show the reason for such detention that the court may judge of its sufficiency.

Habits, A Bundle of Iron.—4555.

Hackensack.—In New Jersey, capital of Bergen County. Pop. (1900), 9,443.

Hackett, James Henry.—(1800-1871.) A noted American actor.

Hackleman, Pleasant A.—An officer of the U. S. army in the Civil War; killed at Corinth, Miss., Oct. 4, 1862.

Hackmatack, The.—See LARCH, 2862.

Haddock, The.—See COD, 2681.

Hading, Jane Alfrédine Tréfouret.—Born at Marseilles, 1859; a noted French actress.

Hadrian, Publius E. H.—A Roman emperor, born in A.D. 76 and died A.D. 138. His rule began in A.D. 117, when the empire was disturbed by a revolt among the warlike Parthians, and by insurrections in Egypt and Syria. He however did not care for war, but spent his time in traveling about the Roman provinces, and seeing that they were well governed and that his troops were disciplined and well trained. He visited Britain, and to protect the boundaries there of the Roman province, he built the wall, called by his name, between the mouth of the Tyne and the Solway, to prevent the Picts and Scots from making forays to the south of it.

Hadrian's Wall.—Built by Hadrian as a defense for the Roman province of Britain; it extended between the Solway Firth and the mouth of the Tyne. See foregoing article.

Haeckel, Ernst.—Born, 1834; an eminent German naturalist, and an exponent of Darwinism and the biological theory of Evolution.

Hafiz, Shams ed-din Muhammad.—Born early in the 14th century. A Persian poet, philosopher; and divine. His tomb at Shiraz, his birthplace, is still a resort for pilgrims.

Hagen, Hermann August.—(1817-1893.) A noted German-American entomologist.

Hagenbach, Karl Rudolf.—(1801-1874.) A German-Swiss Protestant theologian and church historian.

Hagerstown.—A city in Md., on Antietam Creek; noted for its manufactures. Pop. (1900), 13,591.

Haggard, H. Rider.—Ditchingham House, Norfolk, England, age 46; spent his early life as a government official in S. Africa, where he hoisted the British flag over the Transvaal in 1877; leaped into fame with "King Solomon's Mines" (1886), and was first favorite as a writer of African adventure novels; he still travels and romances, but is plunged in rural depopulation problems and East Anglian agricultural affairs, playing the rôle of a gentleman farmer (new style).

Hague, The.—A city in Holland, the seat of the Netherlands Government, situated within 3 miles of the North Sea, and about 34 miles S. E. of Amsterdam. It is the official and diplomatic capital, the meeting place of the States-general, and in early times the abode of the counts of Holland. It derives its name from the "Haeg," or hedge, inclosing the magnificent park, with its majestic trees, which was the ancient hunting-ground of Dutch nobles. It has a royal library, palaces, and fine civic town hall. In 1899, it was the meeting place of the International Peace Conference summoned by the Czar of Russia. Pop. (1899), 206,000.

Hahnemann, Christian Friedrich Samuel.—(1755-1843.) A German physician, founder of homeopathy.

Hail and Rain.—Hail is the name given to the small masses of ice which fall in showers, and which are called hailstones. When a hailstone is examined it is found usually to consist of a central nucleus of compact snow, surrounded by successive layers of ice and snow. Hail falls chiefly in spring and summer, and often accompanies a thunderstorm. Hailstones are formed by the gradual rise and fall, through different degrees of temperature (by the action of wind-storms), and they then take on a covering of ice or frozen snow, according as they are carried through a region of rain or snow.

With regard to rain, it may be said, in popular language, that under the influence of solar heat, water is constantly rising into the air by evaporation from the surface of the sea, lakes, rivers, and the moist surface of the ground. Of the vapors thus formed the greater part is returned to the earth as rain. The moisture, originally invisible, first makes its appearance as cloud, mist, or fog; and under certain atmospheric conditions the condensation proceeds

- still further—until the moisture falls to the earth as rain. Simply and briefly, then, rain is caused by the cooling of the air charged with moisture.
- "Hail, Columbia!"**—An American patriotic song, written by Joseph Hopkinson, 1798. The words were set to the music of the "President's March," and the song has attained great popularity.
- Hainan.**—An island belonging to the province of Kwangtung, China; it lies between the China Sea and the Gulf of Tongking. Estimated area from 12,000 to 14,000 square miles. Pop., about 2,000,000.
- Hainaut, or Hainault.**—A province of Belgium; capital, Mons. Area, 1,437 sq. miles. Pop. (1899), 1,133,672.
- Hair, Care of.**—4135.
- Haiti, or Hayti.**—An island republic (formerly a French colony) situate in the Greater Antilles group of the West India Islands, midway between Cuba and Porto Rico. The republic of Santo Domingo forms the eastern portion of the island; both countries have been the scenes of bloody revolutions. The Dominican Republic was founded in 1844, when it became independent of Spain. Haiti was early settled by French buccaneers, and between their descendants (the mulattos) and the blacks there have been many serious conflicts. Under one of the revolutionary leaders of the blacks, the famous Toussaint L'Ouverture, the whole island was in 1801 practically in his hands, and it cost France an expedition and considerable fighting to recover its possession for a time. It was proclaimed independent in 1804, and is governed under a constitution, which dates from 1889. Haiti has an area of 10,204 sq. miles, and a population estimated at about a million. The capital is Port-au-Prince.
- Hake, The.**—See COD, 2681.
- Hakluyt, Richard.**—Died at London, 1616. A noted English geographer.
- Haideman, Samuel Stehman.**—(1812-1880.) A noted naturalist and philologist.
- Hale, Edward Everett.**—Born at Boston, 1822. Author, editor, and Unitarian clergyman.
- Hale, John Parker.**—(1806-1873.) An eminent American statesman.
- Hale, Mrs. (SARAH JOSEPHA BUELL).**—(1790-1879.) Editor of the "Ladies' Magazine" (Boston) and of "Godey's Lady's Book" (Philadelphia).
- Hale, Nathan.**—Born at Coventry, Conn., 1755; executed at New York, 1776. An American patriot.
- Halévy, Ludovic.**—Born at Paris, 1834. A French dramatist and author.
- Haliburton, Thomas Chandler.**—(1796-1865.) An Anglo-Canadian lawyer and humorist, familiarly known by his pen name of "Sam Slick."
- Halibut, The.**—2667.
- Halicarnassus.**—One of the Greek cities in Asia Minor, on the Ceramic Gulf. It was so strongly fortified that it held out against the siege of Alexander the Great, that on its reduction, Alexander ordered it to be destroyed by fire.
- Halidon Hill.**—In Scotland, near Berwick, the scene in 1333 of the defeat of the Scots by the English.
- Halifax Commission.**—Composed of representatives of the U. S. and Great Britain, who met at Halifax, Nova Scotia, in 1877, to determine the amount this country should pay for the fishing privileges its citizens enjoyed under the treaty of 1871. The Canadians claimed that the reciprocity clause of the latter instrument had worked to their decided disadvantage and to the very marked advantage of American fishermen. The commission made an award of \$5,500,000 in favor of Great Britain, and Congress appropriated that sum.
- Halifax, Nova Scotia.**—Founded in 1749, a city and seaport, on a beautiful harbor of the Canadian province of N. S., the chief naval station of Britain in North America. The opening of the Seven Years' War saw the harbor filled with the warships and transports of the expedition sent out by Pitt against Louisburg and Quebec. Here also, during the Revolutionary War, were gathered the royal forces which were launched with such ill-success against the insurgent American colonies; and here, too, after the war, streamed the 10,000 exiled Loyalists who sought new homes for themselves under the British flag. The water-approaches to the town frown with forts and batteries. The chief buildings of interest are the Citadel, the Provincial Legislative Chambers, etc., together with the fine residences along the Northwest arm. The town of Dartmouth is on the opposite side of the harbor.
- Hall, Charles Francis.**—(1821-1871.) A noted American Arctic explorer.
- Hallam, Henry.**—An eminent English historian, born in 1777, and died in 1859. His writings are highly valued by students of history, especially his notable work, entitled "View of the State of Europe during the Middle Ages," and his "Constitutional History of England, from the Accession of Henry VII. to the Death of George II." He has also written a compendious and careful "Introduction to the Literature of Europe in the 15th, 16th, and 17th Centuries." He was a man of great erudition and wide reading. His son, Arthur Henry Hallam (b. 1811, d. 1833), whose "Remains" were published, with a "Life" by his father, was the intimate and close friend of Tennyson in his youth, and forms the subject of that grand poem of our age, "In Memoriam," if, indeed, he is not the inspirer of it.
- Halle.**—A city of Prussian Saxony, Germany. Its university was founded by Frederick I. 1694. Pop. (1900), 156,611.
- Halleck, Fitz-Greene.**—(1790-1867.) An American poet; one of the original trustees of the Astor Library.
- Halleck, Henry Wager.**—(1815-1872.) An officer of note in the U. S. army.
- Halley, Edmund.**—(1656-1742.) A celebrated English astronomer.
- Halloween, or Hallow-eve.**—See ALL SAINTS' DAY.
- Hals, Frans.**—3493.
- Hamburg.**—A free city and important seaport of Germany, situated on the Elbe, 170 miles N. W. of Berlin. It is the great emigrant port for northern Europe, and next to London and

- Liverpool the most important commercial town in Europe. In the Middle Ages, Hamburg was, with Lübeck and Bremen, one of the chief towns of the Hanseatic League, a great confederation of towns on the Baltic and neighboring states, formed in the 13th century, for the protection of commerce. It retains to-day some of its old-time privileges in the German empire, being not only a free city, but a state and republic, with a territorial area of 158 square miles and a population of 768,349, of which 705,738 form the population of the city. In 1888, it was incorporated in the Zollverein, a union of the German states for the maintenance of a common tariff on imports from other countries and of free trade among themselves.
- Hameln, or Hamelin, The Pied Piper of.**—A magician of mediæval legend, who, in 1284, being refused payment for his services in clearing the town of rats, led away by his magical playing 130 children, who entered into a hill (Koppenberg) and were never afterward seen. The story is the subject of a poem by Robert Browning. China and Persia have similar legends.
- Hamerton, Philip Gilbert.**—An English writer on art, landscape painting, and etching, as well as on literature. Born in 1834, he died sixty years later (1894). His works embrace "Etching and Etchers," "Contemporary French Painters," "Painting in France," "The Graphic Arts," and an instructive and delightful work entitled "Thoughts on Art." In literature proper, he published "The Intellectual Life," and "Human Intercourse," the latter a collection of essays on life and society. He founded and edited for many years a well-known art journal, "The Portfolio," and also published a series of excellent biographies of French artists, under the title of "Five Modern Frenchmen."
- Hamilcar.**—Surnamed BARCA, a noted Carthaginian general and father of Hannibal, who lived about the close of the First Punic War. At this period, Rome had gained her first possession outside Italy, *viz.*, Sicily, and here the Romans and Carthaginians first encountered each other. Rome had also her eyes on Spain, but Hamilcar desired to make it a Carthaginian province. He therefore got his countrymen to send him thither, where he conquered all Spain up to the river Tagus, after which he designed to fight the Romans on their own soil. He was, however, killed about 228 B.C., while fighting the Vettones, and Hasdrubal, his son-in-law, went on with his conquests, till he, too, was killed (in 221), and Hannibal became general of the Carthaginians at the age of twenty-six.
- Hamilton.**—(1) A town in N. Y. on the Chenango, the seat of the Baptist institutions, Hamilton Theological Seminary and Colgate University. Pop. (1900), 1,627. (2) A city in Ohio, on the Miami River, noted for its manufactures. Pop. (1900), 23,914.
- Hamilton, Alexander.**—Statesman and financier; sketch of, 247.
- Hamilton, Andrew Jackson.**—(1815-1875.) A celebrated southern "Union man" during the Civil War.
- Hamilton, Charles S.**—A volunteer officer of the Civil War. He entered the U. S. army in 1861, as colonel of the 3d Wisconsin and was promoted to major-general; served in the West and was highly commended for gallantry at Corinth, Miss., Oct. 4, 1862.
- Hamilton, Gail.**—The pseudonym of Mary Abigail Dodge, a popular writer. (See DODGE, MARY ABIGAIL.)
- Hamilton, Paul.**—(1762-1816.) He was comptroller of S. C. (1799-1804), governor (1804-06), and Secretary of the Navy under James Madison (1809-13). He was strenuous in enforcing the embargo policy of the government in the War of 1812, and it was in spite of his mandate "to remain in Boston until further orders" that Hull on the "Constitution" defeated and captured the "Guerrière."
- Hamilton, Schuyler.**—Born at New York, 1822. An officer of the U. S. army.
- Hamilton, Sir William.**—A distinguished Scottish philosopher and metaphysician, born in 1788, and died in 1856. He was for twenty years professor of logic and metaphysics at the University of Edinburgh and a large contributor to the "Edinburgh Review." His writings embrace, besides his lectures on "Logic" and on "Metaphysics," "Discussions in Philosophy, Literature, and Education," and "Philosophy of the Unconditioned." He also edited editions of the works of the Scottish philosophers, Thomas Reid and Dugald Stewart.
- Hamlin, Hannibal.**—(1809-1891.) An American statesman.
- Hammerer, The.**—A sobriquet applied to Gen. Ulysses S. Grant, because of his constant "hammering" at the Confederate army of Gen. Lee, until he compelled its surrender.
- Hammerfest.**—A seaport of Finmarken, Norway; the usual starting point for Arctic expeditions.
- Hammond, Henry.**—(1605-1660.) A celebrated English divine and scholar.
- Hammond, William Alexander.**—(1828-1890.) A noted American physician and surgeon. Surgeon-general of the army, 1862-64.
- Hampden, John.**—An English patriot, statesman, and soldier of the era of Charles I., who resisted that monarch's arbitrary rule and illegal taxation. He was one of the three great commoners of the period,—Hampden, Pym, and Cromwell,—the leaders of the patriotic party in the Short and the Long Parliaments, and one of the five members who brought forward the "Grand Remonstrance," complaining of the king's misgovernment, and who in 1642 were impeached by Charles. He is especially known as having tested in the courts the legality of the ship-money tax, and stood valiantly for the defense of the rights and privileges of Parliament against royal encroachment. His attitude and that of his fellow-commoners precipitated civil war. In the early battles of the war, Hampden, fought on the Parliamentary side, and was killed in a skirmish at Chalgrove Field, in 1643.

Hampton, Wade.—Born, 1818. An American general in the Confederate service. Governor of South Carolina, 1876-79; U. S. senator, 1879-91.

Hampton Court.—A royal palace erected by Cardinal Wolsey; its site is on the Thames, 12 miles from Charing Cross, London.

Hampton Normal and Agricultural Institute.—A training school near Hampton, Va., for negro and Indian young men and women to become teachers among their own people. It was founded by Gen. S. C. Armstrong in 1868, and incorporated by the state of Va., in 1870.

Hampton Roads.—A channel south of Fort Monroe, Va., connecting Chesapeake Bay with the estuary of James River. (See HAMPTON ROADS, BATTLE OF.)

Hampton Roads (Va.), Battle of.—A naval engagement of the Civil War, notable from the fact that it was the first contest between ironclad vessels in the history of maritime warfare. As such it fixed the attention of the entire civilized world; and from the principles offensive and defensive, rudely embodied in those pioneers in ironclad warfare, have grown the mighty battleships of the present day. For an account of this battle and a description of the vessels engaged—the "Merrimac" and the "Monitor." (See ERICSSON, JOHN., 173.)

Hampton Roads Conference.—A conference held at Fortress Monroe near the end of the Civil War. It was attended by commissioners appointed by the Confederate government at Richmond and representatives of the U. S. Government at Washington, including President Lincoln in person. Its purpose was to devise a plan, if possible, to secure a cessation of hostilities and

a termination of the war. The representatives of the two governments could not agree upon terms of peace and the conference was wholly barren of result.

Hancock House.—An ancient building which formerly stood in Boston, Mass., and was the residence of Gov. John Hancock (1790-93). It was demolished in 1863.

Hancock, John (1737-1793), was president of the Provincial Congress, 1774-75; president of Congress, 1775-77; the first signer of the Declaration of Independence, and governor of Mass. (1780-85 and 1787-93).

Hancock, Winfield Scott.—(1824-1886.) An eminent soldier of the Civil War. He graduated at West Point in 1844 and served in the Mexican War; was made a brig.-gen. in 1861 and a maj.-gen. soon afterward; commanded a division and later a corps, in McClellan's campaigns and at Fredericksburg and Gettysburg; at the latter he was severely wounded; was conspicuous in Grant's Va. campaign of 1864. At Spottsylvania he charged the Confederate works at dawn (May 12), pierced the line and captured 4,000 prisoners, including Maj.-gen. Edward Johnson. In Nov., 1864, he was chosen to organize and command the 1st corps of Veteran Reserves. After the war, having been made a maj.-gen. in the regular army, he commanded successively the Dept. of Missouri, Dept. of the Gulf, and Dept. of the Atlantic. In 1880 he was the Democratic candidate for President, but was defeated by Garfield. He was a soldier of great valor and capacity and the idol of his soldiers, by whom he was called "The Superb."

HÄNDEL

WHILE Bach was making his constant struggle against poverty, and, from the retirement of his quiet life, was giving to the world the works which so strongly influenced the subsequent history of music, his brother in art, George Friedrich Händel (as it is written in German) was gaining and losing fortunes, and producing masterpieces, in a different field of music and from a different sphere of life. The lives of the two masters cover almost exactly the same period, for they were born in the same year, 1685, and died but a few years apart. Händel was born February 23, a month earlier than his great contemporary, but in the history of musical development, he comes after Bach, because Bach stands between the old school and the new, representing the culmination of the one and the foundation of the other, while Händel belongs to a comparatively modern epoch.

Like Bach, Händel was a Thuringian, his native place being Halle, but he was not, like Bach, of a musical family, a fact which operated greatly to his disadvantage; for his father was ambitious to have his son distinguish himself in the law. With this object in view, the elder Händel sought to check the boy's inclination toward music, which very early showed itself, and to prohibit all music practice. But as in the case of Bach and the forbidden manuscripts, genius was not to be baffled. The little musician, at the age of six, found the spinet which his father had hidden in the attic,

and there, with his mother's connivance, continued to practise, often late at night, without his father's knowledge. And thus, without instruction, he taught himself to play.

When the boy was seven years old, his father had occasion to visit Weissenfels, where another son was in the service of the duke. When he had driven a considerable distance from home, he discovered George "hanging on behind" the carriage. It was too late to send him back, so he took the little fellow with him to his destination. While there, the future composer of *The Messiah* managed to slip into the ducal chapel, where he played upon the organ. The music was overheard by the duke, who recognized the child's great gift, and persuaded his father to bestow upon him a musical education, and to allow him to follow the career for which he was manifestly intended. The little fellow was accordingly placed under the instruction of Zachau, the organist of the Halle cathedral. At the age of ten, Händel had composed six sonatas for two oboes and bass, and his sacred motets had been sung in the Halle cathedral. At the age of eleven, his teacher confessed that the pupil knew more than himself, and advised that he be sent to Berlin to continue his studies. In 1696, Händel's father took him to the Prussian capital, where his talents were immediately recognized. He was remarkable at this time as an improviser on the harpsichord. In fact, his wonderful oratorios were but great improvisations, so rapidly were they written. He became, also, the greatest organist of his time, with the exception of Bach.



In 1704, the composer produced his first notable work, the *Good Friday Passion* cantata, and the following year his first dramatic work, the opera, *Almira*, which was an immediate success. Three other operas followed. By economical living, he had saved enough to pay for a long-desired trip to Italy, and thither he went in 1707. He visited Florence, Venice, Rome, and Naples, and spent three years in Italy—years which were among the happiest of his life. He produced a number of operas during his stay in Italy, which were popular at the time; but he is not remembered for his Italian compositions, though they contain much that is good.

Upon his return to Germany, Händel was honored with an appointment by the Elector of Hanover, who granted him leave of absence to visit England. He was immediately employed to produce an opera and wrote *Rinaldo*, which became at once immensely popular. Some of its airs are still well known. The composer returned to his duties in Hanover, but in 1712 obtained permission for a second visit to England. This time the attractions of London proved too strong for him, and he did not go back to his royal master. From this time Händel was an Englishman. The great works by which he is known everywhere, the oratorios, are essentially English in spirit, and are works of English art. He occupies in the music of England the place that Milton does in her literature, and he is the exponent in music of the religious sentiment of the English people.

In 1717 Händel accepted an appointment from the duke of Chandos, at whose magnificent abode, called "Cannons," he resided for three years. Here he composed his celebrated twelve anthems, which, in many respects, may be considered the forerunners of the oratorios. For twenty-five years after his arrival in England, Händel devoted himself to writing and conducting operas. For a time he was brilliantly successful; then his popularity waned, in spite of heroic efforts on his part to prevent it, and opera after opera failed.

At length his genius found its true path and followed it. In 1738, he wrote *Saul*, which brought him deserved success, but not a permanent one, for when, in the following April, he produced the masterpiece of his masterpieces, *Israel in Egypt*, it proved a flat failure. So also did other great works which were composed in those years of his great productivity, 1738-41, for instance the music to Dryden's *St. Cecilia's Day*, and that to Milton's *L'Allegro* and *Il Penseroso*.

It remained for Ireland to recognize the genius to which fashionable London had been blind. In 1741, by invitation of prominent Irish people, Händel went to Dublin. Here the hall in which his works were given—the works to which London had refused to listen—was crowded to suffocation. The composer, encouraged by this public appreciation, determined to bring out a work that he had not yet presented to an English audience. In the preceding year he had written his great *Messiah*, and on April 13, 1742, he offered it to the judgment of the people of Dublin. His confidence was not misplaced. The audience was raised to the highest pitch of enthusiasm by its grand arias and its glorious choruses. It was the proudest event, the crowning glory, of the composer's life.

From this triumph began a change in Händel's fortunes. Prosperity and affluence gradually returned to him, and his wonderful powers remained in full strength. The production of *The Messiah* was followed by many other oratorios. While writing *Jephtha*, Händel was attacked by the disease which resulted in blindness. The cunning of his fingers, however, did not desert him with his eyesight. He still held congregations spellbound by his wonderful improvising on the organ, and was ever ready to conduct musical performances in behalf of charities. Händel died on Good Friday, April 14, 1759, and lies in the poet's corner of Westminster Abbey, among others of England's greatest.

Händel is now known principally by his oratorios, of which the most familiar are *The Messiah*, *Israel in Egypt*, *Saul*, *Samson*, *Judas Maccabæus*, *Hercules*, and *Alexander's Feast*. *The Messiah* has always been the most popular and the best loved, though critics consider *Israel in Egypt* his masterpiece of oratorios, which places it at the head of all sacred compositions. His *Te Deums* are always enjoyed by lovers of good music. The Dettingen *Te Deum* is probably the greatest piece of martial music ever composed.

The characteristics of Händel's music are grandeur and simplicity. His compositions are conceived on a majestic scale, his ideas are clear and definite, and the means employed in carrying them out are simple and direct. His expression of pathos, in which he had wonderful power, is with a grave seriousness far removed from sentimentality. As a writer of vocal, and above all of choral, music, Händel was supreme. His compositions of this class are unapproachable. He was able to extract wonderful results from a body of voices by artfully simple means. As descriptive chorals, the grand chains of choruses in *Israel* and in *Solomon*, are matchless.

In writing *The Messiah*, Handel believed himself inspired. "I did think," he said, "I did see all heaven before me, and the great God Himself." During the rendering of the "Hallelujah" chorus, when *The Messiah* was first produced in London, the king, and all of the audience, overcome with emotion, rose and remained standing till it was finished. This act originated a custom which has continued to the present day. The *Israel in Egypt* is more epic than dramatic in character. It is a story of a great epoch in the nation's history, told by means of choruses and solos. The choruses show Handel in his greatest power. The orchestration is wonderful in its imitative and its suggestive effect. *Saul* is the most dramatic of the oratorios, but it is rarely heard now, only its "Dead March" being familiar to the public. From *Judas Maccabæus* we get the familiar "See the Conquering Hero Comes."

Händel was a master in every branch of his art. He was a most rapid composer, the *Messiah* having been written in twenty-three days; *Israel* in twenty-seven; *Saul* in two months and four days; so that they were practically, as has been said, great improvisations. Such rapidity of composition could only have been accomplished by great labor, and through his wonderful power of concentration.

As befitted the composer of *The Messiah*, Händel was a man of integrity, honor, and independence. He was blessed with a strong sense of humor and much keen wit. He had, however, a violent temper, and indulged occasionally in fits of passion; but he was, withal, kind at heart and generous. He never married, and was therefore able to give largely of his time and his money to charity.

Beethoven considered Händel the greatest composer who ever lived, and said he "would kneel bareheaded before his tomb." Bach was exceedingly anxious to meet his famous contemporary, and once made an effort to do so, when Händel visited Halle, but he was unsuccessful; and the two great composers never met.

Hanging Rock (S. C.), Battle of.—On the evening of Aug. 6, 1780, Col. Sumter, with a force of 150 Americans, attacked the British post at Hanging Rock, a large boulder jutting out from the high bank of the Catawba River, in S. C. A body of N. C. Tory refugees under Col. Bryan fled upon the approach of Sumter, but the Prince of Wales regiment defended the post for four hours, but was defeated and almost annihilated, the British loss aggregating 269. The American loss was 12 killed and 41 wounded.

Hanks, Nancy.—The mother of Abraham Lincoln. (See LINCOLN, ABRAHAM, 368.)

Hanna, Hugh H.—Financier; 254.

HANNIBAL.—(247–183 B.C.)

Hannibal, the great Carthaginian general, won his distinction as a warrior by his desperate contests with the Romans, who were the rivals of Carthage. He was a born leader, and his dignity, power of endurance, and presence of mind made him one of the most famous generals of ancient times. He was a child of the camp. When only nine years of age, at the request of his father, Hamilcar, he took a solemn oath upon the altar of Baal that he would fight Rome as long as he lived; and he was faithful to his vow. While still a boy, he went with his father on an expedition into Spain. When his father died, he acted for awhile with his brother-in-law, Hasdrubal, and finally became commander-in-chief of the armies of Carthage. He was held in the greatest esteem by the soldiers, and won a great reputation for his bravery and skill in strategy.

After the First Punic War, the Romans had gladly closed the Temple of Janus and begun to cultivate the arts of peace; but they had kept themselves prepared for future wars. Carthage, after repairing her losses and regaining her trade, had begun to plan to attack Rome upon her own soil. Hannibal remembered his vow; but before attacking Italy, he spent two years in conquering one-half of Spain. Finally, by besieging Saguntum, a Spanish city which was under Roman protection, he broke the treaty which had been made with Rome. He

ignored the protests of the Roman envoys who were sent to remonstrate. When the Roman senate sent ambassadors to Carthage to complain and to ask that he be given up he was sustained by Carthage.

Surmounting various difficulties, he led his troops into the valley of the Rhone. Though hordes attempted to dispute his passage of the river he routed the enemy and ferried his men across. He was prepared to meet every difficulty as it came, and marching through Gaul, he reached the Alps. With an unconquerable will, he undertook the dangerous task of crossing them. By his determined spirit and firm perseverance he accomplished what had seemed impossible. Through cold and snow, day after day, he led his army up the dangerous path, which in many places had to be cut wider in order to allow his elephants to pass. In many places he found hostile bands of men who hurled avalanches of stone upon his troops to prevent their advance. At last he reached the summit and viewed the plains below. He said to his men: "You are now standing on the acropolis of Italy. Yonder lies Rome." He then descended toward the valley of the river Po. Although half of his men perished from cold or from the attacks of the hostile inhabitants, by his coolness and energy he finally reached the Italian plains with the remainder.

After resting two days, he marched southward with his 26,000 men, gaining victory after victory, and subduing tribe after tribe. He completely routed the army of Scipio near the Trebia River. Before the battle, he said to his soldiers: "The victory will not be difficult. I see, wherever I look among you, a spirit of determination and courage which I am sure will make you conquerors. So far, you have fought your battles for glory or dominion. Now, you have something more substantial to reward your success. There will be great treasures to be divided among you, if we conquer; but if we are defeated we are lost. Hemmed in on every side, as we are, there is no place that we can reach by flight. There is, therefore, no such alternative as flight left to us. We *must conquer*."

Hannibal.—*Continued.*

After wintering in the Po valley, he continued his advance southward, gaining battle after battle, and finally gave the Romans a crushing defeat near the town of Caunæ, almost destroying an army of 90,000 men. Instead of marching on to Rome, he waited for the tribes in southern Italy to declare in his favor, so that he might crush her with her own subjects. He continued to gain victories in southern Italy; but when he heard of the defeat of his brother who was advancing to join him, he became discouraged and retreated to Brutium. Finally, after Rome resolved to carry the war into Africa, he was called home to defend Carthage. At the battle of Zama, he met his first defeat, at the hands of Scipio. He lost almost his entire army. Though he had resisted strong armies in a foreign land, he was conquered in his own country. He saw that fate was against him. He was compelled by his people to accept the humiliating terms which Rome offered.

After the treaty, he was chosen to act as chief magistrate of Carthage. From his boyhood he had been taught to hate Rome and increase the power of Carthage. He felt that the two were such strong rivals that one or the other must be vanquished. He soon began new preparations for a more deadly struggle. He made reforms in the management of the government and secured to the city prosperity and growth. When Rome, fearing that he had plans unfriendly to her, demanded his surrender, he fled to Ephesus, in Asia Minor, and finally found a home with the Prince of Bythunia for whom he gained a naval victory over Eumenes, the King of Pergamus. When Rome sought him there, he chose death rather than capture. Taking poison, he died by his own act (183 B.C.) rather than fall into the hands of his enemies.

Hannibal was certainly a great military genius. He was the moving spirit of the Second Punic War. The Duke of Wellington once referred to him as the greatest of all generals. He was better in a single battle than he was in a long campaign. The idea we get of his work and character will largely depend on our point of view. "He gained the most splendid victories, devastated many lands, embarrassed and stopped the commercial intercourse which was carrying the comforts of life to so many thousand homes, and spread want and terror, with pestilence and famine in their train. He kept the country of his enemies in incessant anxiety, suffering, and alarm for many years, and overwhelmed his own native land, in the end, in absolute and irresistible ruin." In spite of his revengeful spirit, he had many strong traits of character which are worthy of the highest admiration. He was faithful to what he believed to be his duty. He held with unflinching devotion to the cause for which he had sworn to live and die. He had strong courage and patriotism.

Hannibal.—A city in Mo., on the Mississippi River, noted as a railway, commercial, and manufacturing center. Pop. (1900), 12,780.

Hanover.—A province in Prussia. The capital is Hanover. Pop., 194,878.

Hanover Court House (Va.), Battle of.—One of the engagements of the Peninsula Campaign. While McClellan's army was advancing toward Richmond, Gen. Fitz John Porter was sent, with 12,000 men to Hanover Court House, 17 miles north of Richmond, to make a diversion in favor of McDowell, whose corps, which McClellan had left at Washington was en route to join the main army, by way of Fredericksburg. At Hanover, May 27, 1862, in a sharp action, Porter defeated the Confederates under Gen. Branch. The battle resulted in the recall of McDowell's corps for the defense of Washington, while Porter rejoined McClellan at Gaines's Mill.

Hanseatic League.—Signed 1241. A confederation of the cities of North Germany and adjacent countries, having for its object the promotion of commerce and the protection thereof from pirates, robbers, and other enemies. The cities belonging to the League were called the Hanse towns. The last assembly was held in 1669.

Hapsburg, or Habsburg, House of.—A German princely family, many of whose members have worn the crown in Germany, Austria, and Spain. The founder of the House was Count of Hapsburg, whose castle was on the Aar River, in the Aargau, a canton of Switzerland. Since this Count's day many descendants of the family have played a leading part in the history of Continental Europe, and some representatives of the House wore the imperial crown of the Holy Roman Empire. The present imperial family of Austria, including the King, Francis Joseph I., are descended from the Counts of Hapsburg.

Harbor's, The World's Finest.—San Francisco may fairly claim to have the most capacious natural harbor of any of the world's great trading ports. It is also one of the safest. It is entered through the Golden Gate, a passage a mile wide and thirty-five feet deep at low tide—admitting the largest ships afloat without danger of grounding. The landlocked bay of which this harbor is part is fifty miles long, and averages five miles in width. There all the shipping of the entire globe could anchor in perfect safety. Port Philip Bay, the chief harbor of Victoria, Australia, is larger than the Bay of San Francisco, being about thirty-eight miles long by thirty broad, but its very breadth, with its surroundings, leaves it exposed to storms from certain quarters. Port Jackson, on which Sydney, New South Wales, Australia, is located, is a magnificent harbor, completely landlocked, extending inland, in some places, fully twenty miles, and having ample depth of water for vessels of the heaviest burden. The harbors of New York City, Rio Janeiro, Brazil, and Havana, Cuba, are capacious and secure. Next come those of Boston; Norfolk, Va.; Portland, Me.; Halifax, N. S.; Copenha-

- gen, Constantinople, Hong Kong, Yokohama, and Nagasaki.
- Harcourt, Rt. Hon. Sir William Vernon, M.P.**, Malwood, Lyndhurst, England, age 74; Mr. Gladstone's lieutenant in the leadership of the Liberal party; had a brilliant career at Cambridge and at the Bar; Home Secretary in the 1880-85 Govt.; as Chancellor of the Exchequer in 1894 he carried through the most remarkable budget of recent years, equalizing the death duties and reforming the income tax; retired from the leadership of the Liberal party in the Commons, December, 1898; a witty and impressive orator, he has no superior as a parliamentary debater; was one of the original Saturday Reviewers ("Historicus"); is a trenchant controversialist—witness his later attacks on the bishops—a famous talker, a magnificent political fighter.
- Hardee, William J.**—(1815-1973.) A noted officer of the U. S. and Confederate armies.
- Hardicanute.**—Died, 1048. King of England, 1040-42.
- Hard Tack.**—The name universally applied by the soldiers in the Civil War to the bread which was the chief item of the army ration. It was made in the form of square crackers, without salt or yeast of any kind, and baked, and would "keep" for any length of time. It was very hard and good teeth were necessary for its mastication. It was the same as that used on the sea, where it is known as pilot-bread.
- Hardware Business, Conditions in the.**—5283.
- Hardy, Arthur Sherburne.**—Born at Andover, Mass., 1847. An American novelist.
- Hardy, Thomas.**—An English novelist of high rank, who deals, for the most part, with types of rustic life in his own county of Wessex, England, and the realism of every-day existence. Born in Dorsetshire in 1840, he at first became an architect, but later on was drawn to literature, and especially to novel-writing.
- Hare and Hounds.**—1968.
- Harebell, The.**—2908.
- Hargreaves, James.**—Died 1778; an English mechanic, inventor of the spinning-jenny.
- Harlan, John Marshall.**—Born in Ky., 1833. He was attorney-general of Ky. (1863-67), and became associate-justice of the U. S. Supreme Court in 1877.
- Harlem.**—That part of New York City lying north of 106th street and south of the Harlem River.
- Harlem Heights (N. Y.), Battle of.**—After Washington had successfully withdrawn the American troops from L. I., he proceeded to strengthen and fortify his lines at King's Bridge, on Harlem Heights. Sept. 15, 1776, the British ships in the East River landed a small force at Kip's Bay, and on the 16th Gen. Howe sent a regiment and two battalions of infantry to dislodge the Americans. The British were driven back with a loss of nearly 200 killed and wounded.
- Hariequin Snake, The.**—See SERPENTS, 2641.
- Harnoy, William Selby.**—(1800-1889.) An officer of the U. S. army. He entered the army in 1818, served in Mexico as colonel with great gallantry and was brevetted for his good conduct at Cerro Gordo. He was made a brig.-gen. in 1858 and held various commands during the Civil War, but age incapacitated him for active duty in the field. In 1859, while in command of the department of Ore., he took possession of the island of San Juan, which was claimed by the English, for which he was recalled. He was chiefly conspicuous for his efficient service in the far west, during the 20 years prior to 1860.
- Harold I.**—(1035-1040.) King of England and younger son of Canute.
- Harold II.**—The second son of Earl Godwin of England. Opposed William, Duke of Normandy, at Senlac Hill, where Harold was slain, 1066.
- Haroun-al-Rashid (CALIF OF BAGDAD).**—(786-809 A.D.), now the capital of the Turkish province of Mesopotamia. He was styled Aaron the Just, which is the meaning of his name, for he was the most renowned of all the Abbasside dynasty, and in his day made Bagdad the center of civilization and learning, as well as a city of princely splendor. To youth, he is best known from the references to him in the tales of the "Arabian Nights," and all the wonderful things that happened in his reign. The halo that surrounds him, it has to be said, however, is more fabulous than real.
- Harpagus.**—A general in the service of Cyrus, prominent in the conquest of Asia Minor.
- Harper, James.**—(1795-1869.) An American publisher and printer; founder of the house of Harper and Brothers, New York.
- Harper's Ferry.**—A town at the extreme northeastern point of West Va., at the confluence of the Potomac and Shenandoah rivers—of small commercial importance, but of much historic interest. It was the scene of John Brown's "raid," in Oct., 1859, for the purpose of inciting a servile insurrection. (See BROWN, JOHN, 69, also, see HARPER'S FERRY INSURRECTION.) It was the site of a large U. S. arsenal and manufactory of arms and ammunition. Immediately upon the breaking out of the Civil War, the governor of Va. sent Col. Thomas J. Jackson—afterward "Stonewall"—with a force of militia to seize the arsenal, Apr. 18, 1861. At his approach the commandant withdrew his small force and set fire to the works. Jackson's men extinguished the flames and saved most of the arms and machinery, and these were at once removed to safe points in the South, for the use of the Confederate government. Harper's Ferry was soon occupied by a strong Federal force and was the base of military operations in the Shenandoah Valley. In Sept., 1862, just before the battle of Antietam, the place was captured, with nearly 12,000 prisoners, by "Stonewall" Jackson. (See JACKSON, THOMAS JONATHAN, 319, 324-27.) It was held by the Confederates but a short time. Lee retreated to Va. after his brief campaign in Md., and Harper's Ferry again passed into the hands of the Federals. It continued during the war to be a point of great strategic importance.
- It is picturesquely located, at the bottom of a great funnel formed by the high hills which surround it—Maryland Heights on the north,

- Loudoun Heights on the south, and Bolivar Heights on the west — and is a popular summer resort. Pop. (1900), 896; 62 less than in 1890.
- Harper's Ferry Insurrection.**—Also known as John Brown's Raid. It was organized and carried out in 1859 by John Brown, a famous anti-slavery agitator, its purpose being to free the slaves. The insurrection was quelled by U. S. soldiers under the command of Robert E. Lee. Brown, and those of his band who were not killed during the fighting, were hanged at Charlestown, Va., Dec. 2, 1859. (See 73-75.)
- Harpies.**—In Greek mythology, monsters having the head and body of a woman and the wings of a bird of prey. They were armed with sharp talons or claws with which they seized their victims. The number of Harpies has been variously described, but commonly it is given as either two or three.
- Harris, Joel Chandler.**—Born, 1848. An American author and journalist. Noted especially for his negro folk-lore work.
- Harrisburg.**—A city in Pa., on the Susquehanna River. It became the state capital in 1812 and is noted for its important manufactories, especially of steel and iron. Pop. (1900), 50,167.
- Harrisburg Convention.**—The woolen high tariff bill of 1827 passed the House of Representatives, but was rejected in the Senate by the casting vote of the Vice-president. The protectionists thereupon called a convention to meet at Harrisburg, Pa., the following year. This body was made up mainly of delegates from the New England and Middle States. It presented to the people the idea of protection, and decided to ask for an increased duty on woollens and upon other manufactured articles. The activity of the delegates to this convention and the sentiment aroused, resulted in the passage of the high-tariff laws of 1828, which its enemies characterized as "The tariff of abominations."
- Harrison, Benjamin.**—Twenty-third President; sketch of, 262.
- Harrison, Frederic.**—Born in London in 1831. An English man of letters, a positivist in religion and a radical in English politics.
- Harrison, William Henry.**—Ninth President, 268.
- Harrison's Landing.**—On the lower James River in Va., often mentioned in the Civil War.
- Harrodsburg.**—The oldest town in Ky., much resorted to for its mineral waters. Pop. (1900), 2,876.
- Harry of the West.**—A popular name given to Henry Clay by his political and personal friends.
- Hart, John.**—(1708-1780.) He was a delegate to Congress from N. J., 1776, and one of the signers of the Declaration of Independence.
- Hart, William.**—(1823-1894.) Noted as a landscape and animal painter.
- Harte, Francis Bret.**—Born 1839; an American humorist, novelist, and poet.
- Hartford.**—The capital of Conn., noted for its manufactures of firearms, bicycles, etc.; also for its educational and benevolent institutions. Of its early manufactures we have in the following an interesting record. General Washington, in 1789, visited a mill at Hartford, Conn., which made 5,000 yards of cloth and sold it at \$5.00 a yard. Washington wrote in his diary. "Their broadcloths are not of the first quality as yet, but they are good, as are their cassinets, cassimeres, serges, and everlastings; of the broadcloth I ordered a suit to be sent me at New York, and of their commoner goods a whole piece to make breeches for my servants." Pop. (1900), 79,850.
- "Hartford," The.**—The flagship of Admiral Farragut, at the Battle of New Orleans and the battle of Mobile. (See FARRAGUT, DAVID GLASGOW, 179.)
- Hartford Convention.**—The historically celebrated Hartford Convention was in session in Hartford, Conn., from Dec. 15, 1814, to Jan. 5, 1815. It met behind closed doors, and denounced the war with Great Britain as injurious to the commercial interests of the Eastern States. It was essentially a Federalist body, and Mass., R. I., Conn., N. H., and Vt. were represented. The delegates attacked the government for drafting men for the army, and called for reforms in state rights. When charged with an attempt to revolutionize the country, they disavowed any present intention to disrupt the Union, but startled the people by admitting that "if a dissolution should become necessary by reason of the multiplied abuses of that administration, it should, if possible, be the work of peaceable times and deliberate consent." The convention enunciated the proposition that it is as much the duty of the state authorities to watch over the reserved rights, as of the U. S. to exercise the powers that are delegated. Mass. and R. I. indorsed the course of the convention, and Congress was urged to act in sympathy with the Hartford body, but ignored the recommendation. The proceedings of the Hartford Convention are interesting and curious as illustrating the fact that the idea of secession and state rights early developed in a political party, whose genius was wholly opposed to such distinctive and subversive tendencies. The Hartford Convention virtually ended the career of the Federalist party.
- Hartsville (Tenn.), Battle of.**—Dec. 7, 1862, Gen. John H. Morgan, an exceedingly enterprising Confederate cavalry commander, attacked, at Hartsville, Tenn., a Union force consisting of three regiments of infantry, two detachments of cavalry, and a battery, numbering in all 1,900 men. After a weak defense, the Union commander surrendered and all were made prisoners. The Union troops were not largely out-numbered, if at all, and the surrender, after so feeble a resistance and but trifling loss, was far from creditable.
- Hassler Expedition.**—An expedition of scientific research in the U. S. Coast Survey steamer "Hassler," commanded by P. C. Johnson. It started from Philadelphia and embraced the West Indies, Brazilian coast, Strait of Magellan, the Pacific coast and islands to San Francisco, Cal. The scientific part was under the direction of Prof. Agassiz, with a number of assistants.

Hastings, Warren.—An English statesman, famous for his great services to England as an administrator in India, of which he was the first governor-general. For 35 years, from 1750 to 1785, he was in the East India Company's service, during 13 of which he had charge, first as governor of Bengal and latterly as governor-general, of the affairs of the Indian Empire. While practically master of India, he incurred the hostility of those who were instrumental in bringing charges against him, which were the bases of Burke's bitter invective in the impeachment of Hastings at the Bar of the House of Commons. These charges were chiefly of complicity with the then Indian Chief-justice in confiscating the treasure of the Begum of Oudh, and of taking foul means to get rid of an influential native dignitary obnoxious to both. From these charges Hastings was, however, acquitted. See Macaulay's essay, and Sir Alfred Lyall's monograph on Warren Hastings, in the "English Men of Action" series.

Hatcher's Run (Va.), Battle of.—One of the battles around Petersburg, during Gen. Grant's environment of that place, in 1864. Oct. 27, in an attempt to seize the Southside Railroad, the second corps and part of the fifth corps under Gen. Hancock, forced a passage across Hatcher's Run and moved upon the south side, driving the Confederates before them. The Confederates, however, turned and assailed the Federals with the utmost fury. After a desperate conflict, Hancock withdrew during the succeeding night, having lost 1,900 men. The same point was the scene of another severe engagement, Feb. 5, 1865, when Grant made another attempt to turn the Confederate flank. He succeeded in extending his own position to the westward, losing 2,000 men in the operation. The Confederate loss was about half as large.

Hatchie, Battle of.—See CORINTH, BATTLE OF.

Hats, The Manufacture and Sale of.—5280.

Hats and Head-Gear.—The felt hat is as old as Homer. The Greeks made them in skull-caps, couical, truncated, narrow, or broad-brimmed. The Phrygian bonnet was an elevated cap without a brim, the apex turned over in front. It is known as the "cap of liberty." An ancient figure of Liberty in the times of Antonius Livinus, A.D. 115, holds the cap in the right hand. The Persians wore soft caps; plumed hats were the head-dress of the Syrian corps of Xerxes; the broad-brim was worn by the Macedonian kings. Castor means a beaver. The Armenian captive wore a plug hat. The merchants of the fourteenth century wore a Flanders beaver. Charles VII., in 1469, wore a felt hat lined with red, and plumed. The English men and women in 1510 wore close woolen or knitted caps; two centuries ago hats were worn in the house. Pepys, in his diary, wrote: "September, 1664, got a severe cold because he took off his hat at dinner;" and again, in January, 1665, he got another cold by sitting too long with his head bare, to allow his wife's maid to comb his hair and wash his ears; and Lord Clarendon, in his

essay, speaking of the decay of respect due the aged, says "that in his younger days he never kept his hat on before those older than himself, except at dinner." In the thirteenth century Pope Innocent IV. allowed the cardinals the use of the scarlet cloth hat. The hats now in use are the cloth hat, leather hat, paper hat, silk hat, opera hat, spring-brim hat, and straw hat.

Hatteras, Cape.—A sandy point projecting into the Atlantic, on the coast of N. C., noted for the violent storms that occur in its vicinity.

Hatteras (N. C.) Expedition.—The first attempt by the Federals, early in the Civil War, to effect a lodgment on the Atlantic coast, south of Va. Aug. 26, 1861, an expedition sailed from Fortress Monroe, under the command of Gen. Butler. The vessels transported a force of soldiers for land service, while the coöperating naval force was commanded by Commodore Stringham. The point of attack was Cape Hatteras Inlet, N. C. After a short bombardment from the vessels, Fort Hatteras, the principal work was surrendered on the 29th, with 600 prisoners, and much artillery and ordnance stores. The expedition was entirely successful in the achievement of its object.

Hauk, Minnie.—Born at New York, 1852. A noted American singer.

Havelock, Sir Henry.—A British general, one of the heroes of the Indian Mutiny (1857), was born in 1795, and died at Lucknow, India, in 1857. He entered the army in 1815, and in India, whither he went in 1823, he served in the Afghan and Sikh wars, and also in Persia. Throughout his military career he manifested the traits and bore the character of a Christian soldier. At the outbreak of the Indian Mutiny, he was sent to the relief of Cawnpore and Lucknow. After a forced march, with a small column of troops, he moved upon Cawnpore, where Nana Sahib and his Sepoy mutineers had put all the Europeans, including many women and children, to death. After many conflicts with the Sepoy assassins, and aided by reinforcements under General Outram, Havelock pushed on to the relief of Lucknow, which he reached in Sept. (1857). There, being himself beleaguered, he intrenched himself with his handful of heroes in the Residency, which he defended until November, when he was rescued by the relieving column under Sir Colin Campbell (afterward Lord Clyde). Havelock's health, meanwhile, had been so undermined by his anxieties and privations that he fell a victim to dysentery and died Nov. 24, 1857. To his son was afterward given a baronetcy, and to his widow a considerable pension.

Haverhill.—A city in Mass., situated on the Merrimac River; the birthplace of Whittier; noted for its shoe manufactures. Pop. (1900), 37,175.

Haviland, John.—(1793-1852.) A noted Anglo-American architect.

Havre, Le, or Havre (formerly HAVRE-DE-GRÂCE).—A seaport of France, situated at the mouth of the Seine.

Hawaii, or Sandwich Islands.—Annexed by the United States in July, 1898, consists of 8 inhabited and

4 uninhabited islands in the North Pacific, 2,100 miles west of San Francisco, and about 3,400 miles east of Japan. The area of the entire group is about 6,500 square miles, with an estimated population of 154,000, chiefly natives of the Polynesian race. The largest of the islands is Hawaii, but the capital (Houolulu) is on the island of Oahu. The products are sugar, rice, taro, coffee, bananas, and pineapples. There is a growing live-stock industry and a considerable exportation of wool. The value of the exports to the United States was in 1900, over 20 million dollars, with imports of 13½ million dollars. In the larger islands, which are of volcanic origin, there are over 100 miles of railroad, and the capital operates lines of electric railway and tramways. There are also several good banks, and there has been fair educational progress of recent years. Under the governor, Sanford B. Dole, there is a territorial legislature, chiefly of republicans and independents, with a delegate representative to Congress. The climate is mild and equable; the mean annual temperature on the coast is 68° on the windward and 80° on the leeward side of the islands. The islands are connected both east and west by submarine cables. The chief are Hawaii, Maui, Oahu, Kauai, Lanai, Kahulau, Molokai, and Niihau. They were first discovered by Gaetano in 1542, and were again discovered in 1778, by Capt. Cook, who, in Feb., 1779, was killed by the natives. The inhabitants are about one-fourth Hawaiians, the remainder being Chinese, Japanese, and Portuguese, with a few Americans, English, and Germans. The government was formerly a monarchy, with a king, cabinet, and legislature. After the death of King Kalakaua, in 1891, Queen Liliuokalani came to the throne. She was deposed by a committee of safety, Jan. 17, 1893, and a provisional government was formed, headed by Sanford B. Dole. A treaty of annexation to the U. S. was then concluded and sent to the Senate by President Benjamin Harrison, and was pending when President Cleveland was inaugurated. He promptly withdrew it. The restoration of the queen was attempted, but the scheme failed. July 4, 1894, a republic was proclaimed, with Mr. Dole as president. After President McKinley's accession another treaty of annexation was sent to the Senate. Pending its consideration, a joint resolution passed Congress annexing the islands. It was approved July 7, 1898.

Hawels, Rev. H. R., 31, Devonshire St., London, age 63; has been for 34 years incumbent of St. James's, Marylebone; the most versatile of clergymen; a musician, lecturer, traveler, journalist, and voluminous author; a broad churchman, who does not scorn to make his services entertaining.

Hawk, The.—2526.

Hawkeye State.—Iowa; so-called, it is said, from an Indian chief who once lived in that part of the country.

Hawkins, Anthony Hope, Savoy Mansions, London, age 38; a novelist who has set two literary fashions. (1) by "The Prisoner of Zenda," (2) by "The Dolly Dialogues"; is a student, a subtle delineator of character, and an earnest politician, who would like to be in Parliament.

Hawley, Joseph.—(1723-1788.) An American patriot.

Hawley, Joseph Roswell.—Born at Stewartsville, N. C., 1826; distinguished as an American general, journalist, and politician.

Hawthorn, The.—2840.

Hawthorne, Julian.—Born at Boston, 1846, son of Nathaniel Hawthorne, noted as a novelist and miscellaneous writer.

Hawthorne, Nathaniel.—(1804-1864.) A distinguished American novelist, who graduated with the poet Longfellow from Bowdoin College in the class of 1825. In 1837, appeared his "Twice-told Tales," which at once brought him to public notice, but it was not until thirteen years later (1850) that "The Scarlet Letter" appeared, followed in the next year by "The House of the Seven Gables," and these brought the writer fame, together with the appointment by President Pierce as U. S. consul at Liverpool, England. There he remained for four years, and in that period wrote "The Wonder Book," "The Snow Image," "The Blithedale Romance," "Tanglewood Tales," and a "Life of Franklin Pierce." Subsequently he published "The Marble Faun," and a series of "Note Books," with accounts of his travels in England and in this country, as well as in France and Italy. See his Life, by Lowell, in the "American Men of Letters" series. (See p. 274.)

Hay, John.—Born, 1838; United States State Sec.; is a fine example of the man of letters and affairs: diplomat, poet, historian, statesman; his "Pike County Ballads" made him beloved of the people, his other works the admired of the educated classes; as American ambassador in London he won golden opinions.

HAYDN

FRANZ JOSEPH HAYDN was born in the Austrian village of Rohrau, March 31, 1732. His father was a cartwright, and his mother had been a domestic servant; yet, humble as was their station, they were possessed of musical talent which was to blossom into genius in their son. We are told that their favorite recreation was practising together, Anne Marie singing, and Matthias Haydn accompanying her on the harp, while the little Joseph pretended to play on a mock violin. A relative, who was

a choir-master and school-teacher, discovered the boy's talent for music, through the correctness of the time he kept in these family concerts, and through the zest with which he took part in the songs. He took him to Hamburg when he was six years old, to use him as a choir-boy and to educate him. Two years later, a choir-master from Vienna noticed the little musician, and engaged him to sing in his choir; in return for this service, Joseph received a home and education, especially musical instruction.

By diligent practice, Haydn's beautiful voice improved until he became leading soprano in the choir. He learned to play on a number of instruments, but he was taught nothing of the theoretical principles of music. His education, both musical and otherwise, he had to acquire as best he could in the intervals of his duties as chorister. The boy made a number of ambitious attempts at writing music while he was still untaught in composition, and when these efforts were laughed at by his master, undismayed, he tried again. While in this position, Haydn's body was as poorly fed as his mind; and his life, was a hard one, lightened only by the irrepressible sense of humor which characterizes so many of his compositions.

Harder years, however, were to come. At the age of seventeen, the boy's voice failed, and his master, on the watch for the first pretext for dismissing him, took advantage of some boyish escapade, and without notice, turned him out on the streets, on a cold winter night, without a penny and without a friend. The next ten or twelve years, was a period of penury and privation, during which he was at times able to earn scarcely enough to keep him alive. Unlike Händel, and many others of the masters, his early efforts at composition do not disclose the genius that ripened later, but they were of benefit in enabling him to become familiar with the various orchestral instruments, and with their possibilities of combination.

Meanwhile, with the help of treatises on the subject, and of six sonatas of Emanuel Bach, which he had managed to procure, Haydn was studying and struggling to acquire the principles of musical form and construction. The poet Metastasio at length became interested in the young musician, secured the daughter of the Spanish ambassador as his pupil, and introduced him to Porpora, probably the greatest teacher of vocal music that the world has ever known, who allowed Haydn to accompany his pupils in their singing lessons.

Brighter days were now at hand. Haydn's compositions began to attract notice. He found friends in several noblemen who commissioned him to compose for them, and who brought to him a number of well-paying pupils. Then he was engaged by Count Morzin to conduct his private orchestra, a position which gave to the young musician an opportunity for orchestral composition. The result was a large number of beautiful string quartets and a symphony, all of which widened his now rapidly growing reputation. In 1760, Haydn was recommended by Count Morzin to Prince Esterhazy, a wealthy nobleman and liberal patron of music, by whom he was engaged as choir-master and orchestra conductor. He remained in the service of the Esterhazy family for thirty years, during which time the fame of his beautiful music was spreading far and wide. Musicians everywhere recognized Haydn as their master. Mozart became his pupil, and between them sprang up a deep friendship that continued until the younger composer's premature death. Mozart, in playful affection, used to call his teacher "Papa Haydn," a name which others took up, and which has clung to him ever since.

Haydn made two visits to England, one in 1791 and another in 1794, each time remaining eighteen months, and enjoying an uninterrupted series of successes and triumphs. He was feasted and fêted everywhere. The royal family showered attentions upon him, and England could not do enough for her distinguished guest. He here

produced some of the greatest fruits of his genius. Foremost among them are his twelve grand orchestral symphonies, known as the *English Symphonies*.

Haydn was sixty-three years old when he left England the second time. Yet he was still to compose works which were to raise him higher than ever in popular fame. He had been present in London at a performance of Händel's *Messiah*, and during the "Hallelujah Chorus," overcome with emotion, he wept like a child, and cried, "Händel is master of us all." From that moment he was possessed with an ambition to write an oratorio, and soon afterward began the work. He spent two years upon it, because, as he said, he "wanted it to last a long time," and the result was the *Creation*. The oratorio was produced in 1798, and met with the brilliant success which, unlike that of so many composers, was the unvarying fortune of Haydn's works, and which eclipsed even that of his previous achievements.

Haydn now began to show the feebleness of age, but, in spite of his infirmities, the people honored him more and more. On March 27, 1808, Haydn's seventy-sixth birthday, there was a crowning tribute of honor to the venerable composer in the form of a production of the *Creation* which had never before been equaled, in the presence of such an audience as had never been seen in Vienna. The Viennese nobility vied with one another in making what proved to be the master's last public appearance his greatest triumph. As Haydn was wheeled in a chair into the theater, the whole audience arose. A princess of the Esterhazy house sat by his side, while other ladies of the highest rank looked to his comfort, and threw their costly wraps about his feet lest he take cold. It was a proud moment for the old master. But at the thrilling change from the minor to the major key which accompanies the words "Let there be light," there was such a tumultuous outburst of applause that the old man could not restrain his emotion, and pointing upward, he is said to have exclaimed: "It all came from heaven." Then he had to be borne to his carriage. He never afterward left his house, and in the following spring he died, May 31, 1809.

In the history of the development of music, Haydn stands apart. He did not pick up the thread where it was dropped by any predecessor, carry it to fuller maturity, and then pass it on to others. He brought to completion the branch of his art which his own great genius originated, and no successor has advanced its development beyond the point where he left it. He stands isolated upon his own lofty pedestal, bearing no logical relation to those who preceded nor to those who followed him. Haydn, however, was the normal product of previous musical development. He took up the musical forms which the Bachs had used; and then he passed them on to Mozart and to Beethoven, whose best work was but the expression of the grander conceptions of their genius, in musical forms which Haydn had already elaborated and adapted.

Haydn was a pioneer in modern orchestral music, and is therefore called the "father of the orchestra." He gained his first ideas of musical construction from Emanuel Bach, who echoed the principles of the great Bach, his father. But for the forms of musical expression which he has worked out from these principles he is also known as "the father of the sonata, symphony, and string quartet," and for these forms Beethoven, Mozart, and all who came after, are indebted to him. He left to the world a surprising number of works, both instrumental and vocal, the latter including many operas and songs. His music is characterized by dainty grace, flowing melody, and delightful humor. The broadest examples of this last quality are the *Farewell*, the *Toy*, and the *Surprise* symphonies.

Probably no other composer has been more uniformly successful, or more universally appreciated, during his lifetime than has the author of the *Creation*, and surely none other has been personally more loved, honored, and revered, by rich and poor, high and low, artist and amateur, than "Papa Haydn."

- Hayden, Mount, or Grand Teton.**—The highest peak of the Teton Range, Wyo. Height, 13,600 ft.
- Haydon, Benjamin Robert.**—(1786-1846.) An English historical painter.
- Hayes, Isaac Israel.**—(1832-1881.) A distinguished Arctic explorer. In 1853 he accompanied E. K. Kane as surgeon to the second Grinnell expedition. In 1860 he commanded an expedition whose object was the discovery of the open polar sea.
- Hayes, Rutherford Birchard.**—Nineteenth President; sketch of, 279.
- Haymarket Riot.**—A riot which took place at Haymarket Square, Chicago, May 4, 1886, involving the police and a mob of anarchists. An open-air meeting, in which certain labor troubles were under discussion was in progress. The police attempted to break up the meeting because of the inflammatory utterances of some of the speakers. During the fight which ensued a bomb was thrown and 7 policemen were killed and 60 wounded. Albert R. Parsons, August Spies, Adolph Fischer, George Engel, Michael Schwab, Louis Lingg, Samuel Fielden, and Oscar W. Neebe, prominent anarchists, were arrested and tried for complicity in the outrage. The case attracted universal attention, and resulted in the conviction of all of the accused. Parsons, Spies, Fischer, and Engel were hanged Nov. 11, 1887. Lingg escaped the gallows by committing suicide while in prison. Fielden and Schwab were sentenced to imprisonment for life, and Neebe for 15 years. These were pardoned by Gov. Altgeld in 1893.
- Hayne, Paul Hamilton.**—(1831-1886.) An American poet.
- Hazardville.**—A village in Conn., noted for its powder manufacture.
- Hazen, William Babcock.**—(1830-1887.) A noted American soldier. Chief officer of the U. S. signal service, 1880-1887.
- Hazlitt, William.**—(1778-1830.) An English essayist and critic.
- Headley, Joel Tyler.**—Born at Walton, N. Y., 1813; died at Newburg, N. Y., 1897. He was the author of numerous historical and biographical works, which include "Napoleon and His Marshals," "Life of Washington," etc.
- Headley, Phineas Camp.**—Born at Walton, N. Y. 1819. A clergyman and writer on biographical subjects. Brother of Joel Tyler Headley. He wrote "The Court and Camp of David," etc.
- Heal-all, The.**—2904.
- Healey, George Peter Alexander.**—Born in 1818; died, 1894; noted as a portrait-painter.
- Health.**—1807.
- Health of Children.**—3621.

HEAT

NATURE OF HEAT

WHEN we stand in the sunshine, or before a fire, we feel hot; when we handle snow or ice, our hands feel cold. The cause of these sensations is called heat. When we feel hot, it is because heat is absorbed by our bodies, and when we feel cold, it is given off by them. What, then, is the nature of heat?

To answer this question let us see how heat can be produced, or generated. We know, that if we draw a cord rapidly through our fingers, they feel hot, and that if we rub a coin briskly with a piece of cloth, it soon becomes warm; if we take a nail and hammer it on an anvil, it soon becomes too hot to hold. In each of these instances, the motion of a body was checked or retarded. When the cord is drawn through our fingers, it moves less easily than it would if it were not gripped by them; and the more we retard its motion by gripping it more tightly, the hotter it makes our fingers feel. When the hammer strikes the nail on the anvil, its motion is checked by the nail, and the faster the hammer moves, the hotter the nail becomes from the hammering. From these experiments, and from others similar to them, we see that whenever the motion of a body is checked, or retarded, heat is generated, and the body is made hot.

In explaining why heat can be produced in this way, it was formerly said that all bodies contain a substance without weight, called caloric, and that, when they were rubbed or hammered, this substance was given off by them. This notion was held until about the end of the 18th century, when it was shown by Benjamin Thompson, Count Rumford, that heat is given off by bodies, as long as they are rubbed. From this fact Count Rumford argued that heat cannot be a substance, because the quantity of any substance, present in a body, cannot be limitless. After a time, the supply of caloric would be exhausted, and rubbing could no longer produce heat.

The explanation that is now given of the production of heat by rubbing, or by striking bodies together, is that, while the motions of the whole bodies are checked, the small particles, of which all bodies are composed, are caused to vibrate very rapidly, and that it is these vibrations, which are too small to be seen, that produce the sensation of heat. This view of the nature of heat is in accord with Count Rumford's discovery, as you will readily see, for so long as the rubbing, or hammering, of a body is continued, it is natural to suppose that the vibrations of its particles, or molecules, as they are sometimes called, will continue.

Perhaps you find it somewhat difficult to grasp this idea, but that need not discourage you, for it is not very easy to comprehend at first. After you have seen how heat affects bodies, and have studied some of its uses, its nature will be better understood.

THE SOURCES FROM WHICH WE OBTAIN HEAT

You have already been told that heat is produced by rubbing bodies together, which is called friction, and by striking them together, which is known as impact. These, however, are not very important sources of heat. The most important source is the sun. Were it not for the heat that comes to us from the sun, this world would not be habitable. Not one plant or animal would be found alive on it; all the oceans and rivers would be converted into ice, and perhaps even the atmosphere, that surrounds the earth, would be converted into a liquid and frozen.

Next in importance to the sun as a source of heat, is chemical action. You have already been told that chemical action is the cause of fire, and that, even when it does not produce fire, it is productive of great quantities of heat, as, for example, in keeping our bodies warm by means of the chemical action that takes place when we breathe. Fire, however, is undoubtedly the most valuable form of chemical action, as a source of heat; and it plays so important a part in our daily lives that it is worthy of special study.

Fire has been called by some the "chief servant of man," and man is the only creature that has learned to make fire his servant. The use of fire shows that man, even in the lowest savage tribes, possesses a higher degree of intelligence than the other animals, and the methods used by different tribes and races of men in making fire, as well as the uses to which fire is put by them, serve as an index of the degree of culture to which they have attained.

There have always been many natural sources of fire, such as volcanoes, burning oil wells, flashes of lightning, blazing meteors, and other less important phenomena. It was from these natural sources that men, in the savage state, learned the uses of fire, and long before they learned to write, they devised methods of making fire artificially. The earliest means employed by men in kindling fire, was, probably, the friction of dry sticks upon one another. This friction was sometimes produced by twirling a stick between the palms of the hands, and at the same time pressing the end down into a small depression in another piece of wood, resting on the ground. When this is done a tiny cone of dust soon gathers, smoulders for a few moments, and then bursts into flame. Instead of twirling the stick between the palms, some tribes learned to whirl it with greater speed by means of a sort of bow, the string of which was wound around the stick. In still other tribes, drawing one stick to and fro across another, was the method employed. All of these methods were necessarily slow, though it is surprising to see how short a time is required to produce fire by friction, if properly done.

From the making of fire by rubbing pieces of wood together, to its production by striking flint upon steel, was a great advance, and those tribes who discovered the new

method, or obtained the knowledge from their neighbors, did not delay in adopting it. From the flint and steel to the match of modern times was the final step, which was a long time in being made.

To trace the development of civilization in mankind by the multiplication of the uses of fire would be most interesting; but it would require too much space to attempt it here. We may, however, note a few of the ways in which fire enters into our daily lives. When we rise in the morning and prepare for the day, we wash with soap formed in caldrons heated by fire. The food we eat at breakfast is cooked by fire, and is served in dishes baked by fire. Fire was used in extracting from their ores the metals of which our knives and forks are made, and in driving the sawmill, in which the wood of our breakfast table was sawed. The house we live in was produced by the aid of fire; its chimneys are built of brick baked by fire, and the mortar that cements them together was formed from lime, obtained by burning limestone in kilns. Other kilns baked the tiles of the hearth, and dried the wood in the doors and floors. From fire-smelted ores were obtained the metal for the water and gas pipes, the bell wires, and every hook or nail used in the building. As with the house, so with its furnishings: Its carpets and curtains were made by harnessing a steam engine to machinery, and scarcely an article can be found in the house into the manufacture of which fire did not enter.

Of far less importance, as a source of heat, than fire, but of an importance that is steadily increasing, is electricity, the only source of heat that has not been mentioned. When a current of electricity passes through a body of any kind heat is produced. If the body opposes much resistance to the passage of the current, the amount of heat produced is large, and if the resistance offered by it is slight, the quantity of heat produced is correspondingly small.

The incandescent electric light affords a very good illustration of the heating effect of electricity. The slender filament, in the bulb of the lamp, affords such high resistance to the passage of the current that it is heated white hot almost in an instant.

THE EFFECTS OF HEAT UPON BODIES

When a body is heated it nearly always expands, that is to say, it grows larger and takes up more room than it did before it was heated. In solid and liquid bodies, this expansion is never very great, though at times it is sufficient to serve very useful purposes. You may have seen blacksmiths putting iron tires on wagon wheels, and noticed them heat the tires, almost red hot, before putting them on. You would have seen, by examining the tire before it was heated, that it was too small to go on the wheel; but when it has been heated, you see it slip on very readily. Evidently the tire has been made larger by heating it. When it cools it shrinks to its former size, and, of course, grips the wheel very tightly, which was the result desired by the blacksmith.

Another very interesting use of the expansion of solid bodies by heat is that seen in the straightening of the walls of buildings that have bulged outward. Holes are drilled through the walls, and long rods of iron are passed through the holes and across the building, leaving their ends projecting outside. By heating the rods they are made to expand, and iron plates are then screwed on their ends until they lie close against the outer surface of the walls. The rods are then allowed to cool, and they contract with such great force that they draw the walls of the building together to their proper shape. By heating some of the rods again, while others are holding the walls from springing back to their former position, the plates may be screwed still further along on the rods and the walls brought still nearer together. In this way, by repeating the process of heating some of the rods, while the others prevent the walls from settling back, and

then moving the plates closer together on the heated ones, any degree of bulging may be corrected.

When liquids are heated, they expand very slowly, and usually at a rate that is quite uniform. An excellent example of this expansion is seen in a thermometer. Most thermometers consist of a very fine, hairlike tube which terminates in a bulb, at one end; both the tube and the bulb contain mercury. When the bulb is cooled, the mercury in it contracts, and some of the mercury in the tube runs down into the bulb. When the bulb is heated, the mercury in it expands and some of it is forced into the tube. By marking the height of the mercury under certain conditions, and dividing the space between the marks into small intervals, called degrees, we obtain a scale which shows the degree of heat, or temperature. The two points generally chosen to form the basis of the scale, are the height of the mercury, when the bulb is plunged into melting ice, which gives the freezing point, and the height, when the bulb is immersed in the steam from boiling water, which gives the boiling point. After these two points are fixed the scale between may be made with as many divisions as are desired. The most convenient number is 100, and that number of degrees is used in what are called Centigrade thermometers. (Fig. 1) In these the freezing point is marked 0° and the boiling point 100° . In the thermometer that is most used in this country, called the Fahrenheit thermometer (Fig. 1), there are 150 degrees between the freezing and the boiling points. The freezing point is marked 32° , and the boiling point 212° . The point marked 0° on this thermometer is the height of the mercury when the bulb is placed in a mixture of snow and salt, called a freezing mixture. A third form of thermometer that is used in some countries is called a Réaumur thermometer.

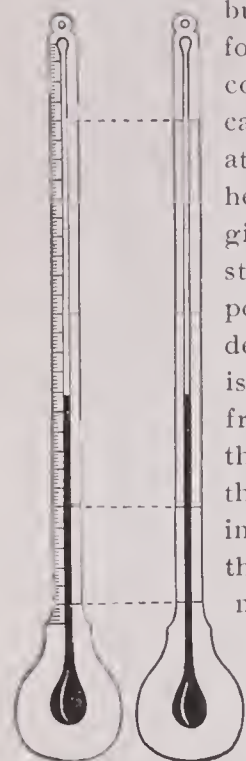


Fig. 1

It has a scale on which the freezing point is marked 0° and the boiling point 80° . Of course each number of degrees has a different meaning on each of these scales, and in order to prevent confusion the number of degrees is always written with a letter after it that shows which thermometer is referred to. Thus 50°C. means 50° on the Centigrade scale, 37°F. , refers to the Fahrenheit scale, and 22°R. means 22° on the Réaumur scale.

When gases are heated they expand much more rapidly than solids or liquids, and all gases expand at almost the same rate, which is not true of either liquids or solids. This rapid expansion of gases, when heated, plays a very important part in a number of processes that will be spoken of in another place.

Some solids have the property of changing to liquids, when they are heated sufficiently. This change is called melting, or fusion, and you have seen illustrations of it in ice, and in some of the metals. There are a great many solids that can be melted by heat, and the degree of heat, or, in other words, the temperature, required to melt them, varies greatly with different substances. In the same substance, under ordinary conditions, the temperature at which fusion takes place is fixed. Thus 32°F. is the temperature at which ice melts, as well as that at which water freezes. It is therefore called the fusion point of ice, or the freezing point of water.

When ice is converted into water, by melting it shrinks in volume, and occupies less space than it did. A few other substances behave in the same way when they melt, but most substances expand when they change from the solid to the liquid form.

If a lump of ice be heated till it reaches a temperature of 32°F. , it does not all turn to water at once. The process is a gradual one, and if the lump of ice is wrapped with a thick woollen cloth, to keep outside heat from affecting the ice, the melting will go on very slowly. In fact, if the ice were so protected from outside influences that no heat could reach it, no melting would take place. This shows that heat is required to

melt ice, even after it has reached the temperature at which fusion takes place. The same fact may be shown by pouring warm water on ice. In melting the ice, the warm water loses its heat and becomes as cold as the ice itself. By observing the amount of heat lost by water in melting ice, it has been discovered that as much heat is required to melt a pound of ice at 32° F. as is required to raise the temperature of a pound of water from 32° F. to 176° F., almost to the boiling point. The water formed by melting the ice is no warmer than the ice itself, so the heat employed in melting it seems to have been lost. This is not true, however, for when it freezes, the ice gives off the same amount of heat that disappears in the melting process. The heat that disappears is simply hidden, hence it is called *latent heat*.

The fact that heat is required to melt ice, is the principle of "freezing mixtures," such as the ice and salt used in freezing ice cream. Salt has a strong attraction for water, and causes the ice to melt, but heat is required to melt the ice, and it must be obtained from the bodies near by. So if the cream to be frozen is placed in a tin vessel, which gives up heat very readily, and the ice and salt are then packed around it, heat will be withdrawn from the cream, which will freeze while the ice melts. By putting the ice in a thick wooden bucket, which gives up very little of its own heat, and prevents the heat of the air from affecting the ice, the freezing of the cream is quickened. It is on the foregoing principles that ordinary ice cream freezers are arranged.

All liquids that do not decompose when heated, are converted into gases, or vaporized. This change may go on slowly at the surface, when it is called evaporation, or it may take place rapidly throughout the liquids, when it is called ebullition, or boiling. Evaporation goes on at all temperatures; but boiling does not begin until the temperature of the liquids has reached a certain point. This point varies greatly for different liquids, but for the same liquid, under the normal pressure of the air, the boiling point is always the same. By heating a liquid in a vessel, from which some of the air has been removed with an air pump, we find that it will boil at a temperature lower than its ordinary boiling point. By pumping an increasing quantity of air into the vessel, we find that the temperature required to boil the liquid is higher than the ordinary boiling point. Extensive experiments have shown that *the boiling point of any liquid is proportional to the pressure upon it*.

When liquids are converted into gases, by evaporation, or boiling, heat becomes latent, just as it did in changing ice to water, and the heat that becomes latent, in the vaporization of a quantity of water, is much greater, than that which becomes latent, when the same quantity of ice is melted.

It is the fact that heat is rendered latent by the vaporization of liquids, that causes the evaporation of perspiration to cool our bodies, and that produces a pronounced sensation of cold, when alcohol or ether is poured upon the skin. Both of the latter liquids evaporate very rapidly, and, in evaporating, they absorb heat from the skin and make it cold.

By subjecting to great pressure some of the substances, which are gases, at ordinary temperatures, and under the ordinary pressure of the air, and at the same time cooling them, they may be converted into liquids. Among the substances that have been so converted into liquids are ammonia, gas, carbonic acid gas, and even air itself. In order to keep these substances in the liquid form they must be kept under enormous pressure, for as soon as the pressure is removed they evaporate or boil, and return to the gaseous form, as rapidly as they can obtain heat sufficient to vaporize them. In vaporizing, they reduce the temperature of everything around them to an exceedingly low degree. The evaporation of liquid air is so rapid that it freezes mercury in a few minutes, and will even convert liquid carbonic acid into a solid that is somewhat like snow.

THE TRANSMISSION OF HEAT

The modes, by which heat is transferred from one point to another are known as *conduction*, *convection*, and *radiation*.

Conduction is that mode of transmission by which heat is transferred from one heated end of an iron rod to the other. It also takes place in liquids and gases, to a slight extent, but in them it is of but slight importance. In solids, however, conduction is the only way in which heat can be transferred, and it is explained in this way. When one part of a solid body, such as an iron rod, is heated, the particles of it are made to vibrate with greater rapidity than before, and they strike with greater force upon those lying nearest to them. These, in turn, have their rate of vibration increased, and strike harder upon those lying just beyond them. Thus, the vibrations of the particles at the end of the rod that is being heated are gradually communicated to those forming the remainder of the rod, until the heat becomes nearly uniform.

The readiness with which heat is conducted, by different substances, varies greatly. Metals are the best conductors, but their conductivity varies considerably. If two rods of the same length, but composed of different metals, as iron and copper, are both heated at one end and you touch them with your finger at the other end, you will find that after a few minutes the copper rod has become hotter than the iron rod. This shows that copper is a better conductor than iron. The clothing we wear is made of fabrics that vary greatly in their capacity for conducting heat. Wool fabrics are the poorest conductors, and linen the best, while cotton and silk lie between these two. Consequently, the best material for winter clothing is wool, because it allows less heat to escape from our bodies.

When heat is applied to liquids or gases, the particles nearest the source of heat expand, become lighter than the other particles, and rise, because the other particles press down around them and force them up. Other particles are continually being brought into contact with the heating surface in this way, and finally the temperature of the whole body of gas or liquid is raised. This mode of transferring heat is called *convection*. You will readily see that convection can only take place in gases and liquids, because the particles of the body must be free to change their relative positions.

Convection is constantly going on, naturally, on the earth's surface where it serves a most important purpose. Over some parts of the earth's surface, the sun shines with much greater heat than over others, consequently, the surface becomes hot and the air lying next it becomes heated also. This heated air rises, because the cooler air over the other parts of the surface presses under it and forces it upward. The cooler air flows in toward the heated regions, and produces the winds, which have so much to do with the distribution of rain, and, hence, with the growth of plants and animals.

Radiation is the way in which heat comes to us from the sun, and in which we are warmed when we stand in front of a fire. Just how heat is transmitted by radiation cannot be explained to you at this point, but will be made clear in connection with the subject of light. The most striking thing about radiation is, that by it heat passes through some bodies without warming them. There are many bodies that permit heat to pass through them in this way, but dry air absorbs very little of the heat that is radiated into it.

When bodies of different kinds are exposed to radiation, the amount of heat absorbed by them varies greatly. The readiness with which bodies absorb heat depends chiefly upon their color. Dark bodies absorb radiant heat much better than light-colored ones, and those, with rough, or dull surfaces, absorb it better than those having smooth, polished ones. This is easily shown by filling two bottles with water, one of

which is clear glass, while the other is coated with soot, leaving them exposed for a while to strong sunlight. After a time, it will be found that the water in the bottle covered with soot, has become warmer than that in the bottle of clear glass.

If we fill the two bottles with warm water, and put them in a cool, shaded place for a while, we shall find, on examining them, that the water in the soot-coated bottle is now cooler than that in the other bottle. This shows that dark-colored bodies not only absorb heat more rapidly than light-colored ones, but also radiate heat better.

By applying the facts shown in the two experiments that have just been described, it is easy to see that light-colored clothing is better for both winter and summer than clothing of darker tint. For in hot weather, light-colored clothing absorbs less of the heat of the sun than dark clothing does, and in cold weather light-colored clothing retains the heat of the body better than the dark, because it is a poor radiator.

HEAT ENGINES

At the beginning of this article, your attention was called to the fact, that by checking, or retarding, motion, it could be transformed into heat. Now we will consider the opposite change of heat into motion, and the means of bringing it about. The production of motion by means of heat is by no means so simple a matter as the production of heat by merely rubbing, or striking two bodies together. Special machines are required to transform heat into motion, and they are known as heat engines. These heat engines are divided into a number of classes, such as steam engines, gas engines, and the recently invented liquid-air engines.

Steam engines were the first of these forms of heat engines to be produced, and they have been made in many different forms, varying in size from an engine that can be hidden under a thimble, to engines weighing hundreds of tons. But the great majority of all these have a number of features in common.

(See Fig. 2.) Each has a furnace, F, in which fuel, generally coal, is burned, a boiler, B, in which water is converted into steam, and, connected with the boiler, a cylinder, C, in which the steam causes a piston, P, to slide back and forth. The entrance of the steam into the cylinder is controlled by a valve, V, which is so arranged, that when the piston reaches one end of the cylinder steam enters in front of it and causes it to travel in the opposite direction. As the piston travels back and forth the steam enters first at one end

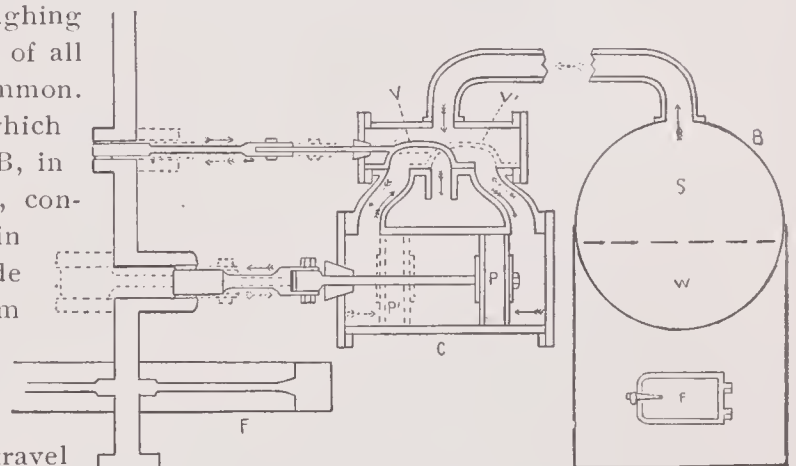


Fig. 2

of the cylinder, then at the other. The piston is connected with a wheel, F, in order to transform its to-and-fro movement into the more convenient rotary movement, and this wheel, which is called the fly-wheel, is very large and heavy, except in locomotive engines. Its great weight is to prevent sudden variations in the speed of the piston.

In gas engines there is no boiler, because steam is not needed. There are a cylinder and a piston, however, and the motion of the piston is produced, by introducing into the cylinder, on one side of the piston, a mixture of gas and air, and exploding the mixture by means of a spark at the right moment. When the explosion takes place, the heat produced by it causes the gas and water vapor, produced by the explosion, to expand with considerable force, and thus to drive the piston back in the cylinder.

Liquid air engines are so new that it is impossible to say with certainty what form they will take. There must always be a very strong reservoir for the liquid air, and a cylinder in which it will expand and cause a piston to travel back and forth, in somewhat the same way that the pistons do in a steam engine. No furnace is required, for air at ordinary temperature yields all the heat that is required to boil liquid air. This fact, that the heat of the atmosphere will be all the heat required for a liquid air engine, is the chief reason for the attention that is now being bestowed upon that form. The low cost at which liquid air is now produced makes it seem probable that it will be extensively used in engines.

Before leaving the subject of heat engines, something should be said about the way in which the power of an engine is measured. If we know the area of the piston in inches, the distance in feet that it travels at each stroke, the number of strokes it makes per minute, and the pressure of the steam in pounds upon each square inch of the surface of the piston, the power of the engine may be easily obtained by multiplying these quantities together. The number obtained in this way, will be the number of pounds that the engine can lift to a height of one foot in a minute. By dividing this number by 33,000 the power of the engine in horse power will be obtained, for an engine of one-horse power can lift 33,000 pounds to a height of one foot in one minute.

Heath, William.—Born at Roxbury, Mass., 1737; died there, 1814. A distinguished general in the Revolutionary War. He was a member of the provincial Congress (1774-75), and became brig.-gen. in the provincial army (1774). He organized the forces at Cambridge before the battle of Bunker Hill, and subsequently became maj.-gen. in the Continental army (1776). He was the author of "Memoirs of Maj.-gen. William Heath."

Heath Family, The.—2888.

Heath Hen, The.—See PRAIRIE HEN, 2511.

Hebe.—The goddess of youth and spring in Greek mythology. She was the cup-bearer of the gods until she was supplanted in this office by Ganymede.

Heber, Reginald.—(1783-1826.) An English bishop and hymn-writer.

Hébert, Jacques René.—(1755-1794.) A French revolutionist. He took an active part in the work of the Revolution chiefly by his pen. He instituted the worship of the Goddess of Reason. He was the chief witness against Marie Antoinette. He was sent to the guillotine by Robespierre.

Hebrides.—A collective name given to all the islands off the west coast of Scotland. They are divided into the Inner and the Outer Hebrides. About 120 of the islands are inhabited, and the total population is about 100,000.

Hebron.—One of the oldest existing biblical cities, is situated among the mountains of Judah in Palestine, about 21 miles south of Jerusalem. The modern town is in a poor condition, and the pop. is about 5,000.

Hecate.—A Grecian goddess, who practised and taught sorcery and witchcraft.

Hecatomb, means literally the sacrifice of 100 victims in the religious rites practised among the ancient Greeks.

Hecker, Isaac Thomas.—Born at New York, 1819; died there, 1888, a Roman Catholic ecclesiastic.

At one time he was a member of the Brook Farm community. In 1849 he was ordained a priest and founded the order of the Paulists in 1858, of which he became the superior. He was also the founder of the "Catholic Times."

Heckewelder, John Gottlieb Ernest.—Born in England, 1743; died at Bethlehem, Pa., 1823. Noted as a Moravian missionary among the Indians.

Hecla, Mt.—A conical-shaped volcanic mountain in Iceland, 20 miles from the southern coast. (Height 5,110 ft.).

Hector.—See STORY OF THE "ILIAD," 1715.

Hector, Mrs. (ANNIE FRENCH).—Born, 1825. Pseudonym of Mrs. Alexander. A British novelist.

Hecuba.—The second wife of Priam, King of Troy. Was led into slavery after the fall of Troy, and saw her children put to death. She took vengeance upon Polymestor, who slew her son, by slaying his children and tearing out his eyes.

Hedgehog, The.—2458.

Hedge-mustard (*Sisymbrium*).—A genus of plants belonging to the order Cruciferae. They are characterized by small yellow or white flowers whose petals are arranged in a cross-like form; the seeds are contained in pods of a roundish or 6-angled shape.

Hegel (*hã'gel*), Georg Wilhelm Friedrich.—(1770-1831.) An eminent German philosopher.

Hegira.—The initial point of time in the Mohammedan calendar is marked by the flight of Mohammed from Mecca to Medina, July 15, 622, although the actual flight occurred on June 20.

Heidelberg.—A city on the Neckar River, in the grand duchy of Baden, Germany, 13 miles southeast of Mannheim. The ruins of its famous castle, for 500 years the home of the electors Palatine, are on the hill behind the town; the city has some interesting historic buildings, churches, etc.; but it is especially noted for its university, founded in 1386, where many of the scholars and literati of Germany have been

- educated. It has a teaching staff of 150, and a student attendance of 1,550; its library contains about 400,000 volumes, and 2,000 rare manuscripts. Population, 40,000.
- Height, Measurement of.**—This is done in one of four ways; by trigonometry; by leveling; by the barometer to test the atmospheric pressure at top and bottom; and by finding the boiling point of water at top and bottom by the thermometer.
- Heine** (*hī'ne*), **Heinrich.**—(1799-1856.) An eminent German critic and lyric poet, of Hebrew descent.
- Helderberg War.**—Demonstrations made at various times between 1839 and 1845, by the Anti-renters of Albany, Rensselaer, Columbia, Green, Delaware, Schoharie, and Otsego Counties, N. Y., and the efforts of the state government to suppress them. Large tracts of land in these counties had been granted by the government of Holland to the early Dutch settlers or patroons. The patroons sublet the land in perpetuity to tenants, who agreed to pay the rent in produce. On the death of Stephen Van Rensselaer, in 1839, his tenants, who had long been dissatisfied, refused to pay rent to his successor. Men disguised as Indians terrorized the region. A sheriff and posse who attempted to collect the rents, were outnumbered, and their efforts proved futile. In 1844 there was again armed opposition to the payment of rent. In 1845 an officer named Steele was shot while trying to collect rent in Delaware Co. Gov. Wright proclaimed the county in a state of insurrection. Two persons were convicted and sentenced to death for this murder, but they were afterward pardoned. The court of appeals, in 1852, rendered a decision, which in the main sustained the tenants and practically ended the movement.
- Helena.**—(1) The capital of Mont., an important business center with gold mines in its vicinity. Pop. (1900), 10,770. (2) A city in Ark., on the Mississippi River. The scene of an unsuccessful attack by the Confederates (1863). Pop. (1900), 5,550.
- Helena** (Ark.), **Battle of.**—During the siege of Vicksburg Gen. Grant, to strengthen his army there, drew troops from all available sources and thereby weakened the forces at other points in that department. Helena, Ark., was garrisoned by 3,800 men under the command of Gen. B. M. Prentiss. A Confederate force numbering 8,000, under Gen. Price and Gen. Holmes, marched from Little Rock to attempt its capture. On July 4, 1863, the day Vicksburg was surrendered, the Confederates made three separate attacks, but were repulsed in all, with a loss of 1,700 men. The Federals were protected by strong intrenchments and lost but 250. Learning of the fall of Vicksburg, the Confederates withdrew from Helena and abandoned the enterprise.
- Helena, St.**—A lonely island in the Atlantic Ocean. It is 10½ miles long and 7 miles wide; pop. (1901), 3,342. Napoleon Bonaparte lived here in captivity from 1815 till 1821.
- Helen of Troy.**—See STORY OF THE "ILIAD," 1715.
- Helicon.**—The abode of the Muses. A mountain range in Bœotia, Greece. Height, 5,736 feet.
- Heligoland.**—An island in the North Sea opposite the mouth of the Elbe. Its length is a little more than a mile, and its population is 2,086. It was taken from Denmark by Great Britain in 1807 and ceded by it to Germany in 1890.
- Heliography**, or sun-writing, is the reflection of a beam of sunlight in a definite direction so that it can be seen by one located in that direction. It is usually accomplished by silvered plate-glass mirrors. By intermittent flashes of light the dots and dashes of Morse's telegraphic code may be indicated. The apparatus used is effective even to a distance of 100 miles. The system is of the greatest service in military and geodetic operations.
- Heliopolis.**—An ancient city in Egypt on a branch of the Nile, near the apex of the Delta.
- Heliotrope.**—A genus of plants belonging to the order Boraginaceæ, often bearing fragrant flowers. That usually cultivated is the Peruvian heliotrope. They thrive well in rich, light soil and are most usually propagated by cuttings.
- Hell, Sufferings in** (Koran).—1747.
- Hellas.**—Originally a small district and town in ancient Thessaly. Later it was the name applied in a general way to all of Greece as being the home of the Hellenes.
- Heller, Stephen.**—(1814-1888.) A distinguished Hungarian composer and pianist.
- Hellespont.**—The ancient name of the Dardanelles.
- Hell Gate.**—A dangerous passage in the East River near New York City. Obstructions were removed by explosions at Hallett's Point in 1876 and at Flood Rock in 1885.
- Helmholtz, Hermann von.**—An eminent German physicist, and ex-professor of physics at the University of Berlin, born in 1821, and died in 1894. To physiology he made in his day many important contributions on the various sense-organs, and to physics he also contributed much, especially on the conservation of energy. His most original work was, however, done in connection with acoustics in its relation to optics; and for these services to science he was ennobled. In 1851, he invented the ophthalmoscope. His published writings include a work on the "Theory of Sound Sensations," a "Manual of Physiological Optics," a treatise entitled, "Sensations of Tone as a Physiological Basis for the Theory of Music," and a work "On the Conservation of Force."
- Helmuth, William Tod.**—A homeopathic physician and writer of New York; born in Philadelphia, 1833.
- Héloise** (*ā-lō-ēz'*).—(1101-1164.) A French abbess celebrated for her romantic relations with Abelard.
- Helots.**—The lowest class of serfs and slaves in ancient Sparta. They served in war as light-armed troops. They were the descendants of prisoners of war, and were often cruelly treated. Large numbers were massacred to keep down revolts.

Helvetii.—A tribe of Celts or Gauls who lived in modern Switzerland, around Lake Geneva and along the upper courses of the Rhine. They were conquered by Cæsar.

Hemans, Mrs. (FELICIA DOROTHEA BROWNE.) — (1793-1835.) An English lyric poet.

Hemiptera.—“Half-winged” insects. An order having four wings, the first pair of which are membranous and without scales. They include water-bugs, boat-flies, and water-scorpions.

Hemlock.—A genus of plants which belong to the order Umbelliferae. The common roadside hemlock (*Conium maculatum*) has a root resembling a parsnip; the stem is from 2 to 7 ft. high, usually purple-spotted, and the leaves are large of a dark shining green color. The plant is poisonous. The Greeks compelled criminals to drink a decoction made from the plant, and it was thus Socrates died.

HEMP, CULTIVATION OF.—

In both temperate and tropical climates, throughout the world, hemp is cultivated for one purpose—the manufacture of rope, cordage, and cloth. The hemp raised in some countries will grow from year to year, for a dozen or more years, without replanting, while in other places yearly plantings are necessary.

The production of common hemp, grown largely in this country, has been decreased during late years owing to the large importation of what is commercially known as manila hemp, a product of our Philippine possessions. In one recent year, the exportation of this hemp to other countries, where it is mainly marketed, aggregated 100,000 long tons.

Another kind of the plant important in the world's consumption, is the sisal hemp of Yucatan; this has a fiber of yellowish white—straight, smooth, and clean. The sisal is also found growing from the naked coral reefs, along the Florida Keys.

For the cultivation of hemp in Yucatan, the soil is first cleared of palmetto scrub-roots, which are found in quantities averaging 20 cords to the acre. A plantation is then established by setting out either suckers or pole plants. When the old plant flowers, the stalk or pole is 15 or 20 feet in height. After tulip blossoms appear, the plant begins to wither, and there starts forth from the point of contact with the flower a bud which develops into a tiny plant. This when grown to the length of several inches becomes detached, and falls to the ground. Such pole plants as come in contact with the soil take root, and in a short time are strong enough to transplant. In the Bahamas, these flower stalk plants are largely utilized to establish sisal fields, and with as good results as where the suckers are used.

In the Bahamas, about 600 plants to the acre are set out in rows, eleven by six feet distant from each other. This space enables the laborers working between the rows to avoid the terrible spurs of the hemp, and also prevents the bruising of the plants through the contact caused by the wind. The piercing of the leaves and the bruising or breaking of them, mean discoloration of the hemp. In Yucatan, the plauting usually takes place in June, when the plants are from six to eight inches in height. At the end of the first year, small plants appear around the base of the older ones. These are used for propagation. At the end of two years, most of the leaves of the largest plants are two feet, eight inches in length, and the longest leaves are more than three feet in length. When four years old, the leaves average thirty-three inches in length, and increase about six inches each year for the next three years. The thrifty seven-year old plant has leaves five feet in length. Harvesting has been going on for several years, when the leaves are found of such size. The leaves of the sisal hemp constitute the valuable part of the product—the part from which is made the better quality of rope for the rigging of vessels. In the common hemp of the United States, and in the manila hemp, the stalk, not the leaves, is used for commercial purposes.

Cultivation and harvesting of hemp are carried on in Yucatan at various times of the year. The laborers cut the leaves with sharp machetes. The cutting of two thousand leaves is considered a good day's work. The annual yield for fiber is from one thousand to fourteen hundred pounds to the acre. From fifty to seventy-five pounds are gathered from one thousand leaves. A hemp plantation usually has from five hundred to eighteen thousand acres under cultivation. The common hemp, such as is raised in Kentucky, is a native of India and of Persia, and is grown almost the world over. It is produced principally for the manufacture of linen threads and the rigging of vessels. Italy produces some of the best of this kind of hemp. The plant reaches a height of from six to fifteen feet.

The making of hemp rope for rigging, and for other uses, is carried on in almost every part of this country. The Russian hemp fiber is highly regarded in rope-walks on account of its great strength, derived largely from the process of retting, or rotting, through which it passes. The first step in rope-making is usually the process of hackling, which separates from the general mass of material about 20 per cent. of tow and waste. The fiber then passes through the spreading and drawing machines, and is afterward converted by the spinning machine into yarn; each yarn is made up of either twenty or forty strands. Yarns of twenty strands make one strand of a three-inch rope, which is a key for sizing. From the spinner, the yarns are wound over a bobbin which will carry 300 fathoms. If the stock is to be made



Hemp, Cultivation of.—*Continued*

into manila, or white rope, the fiber is taken to the laying ground. If for rugged use, it is drawn rapidly, and in large quantities, through exceedingly hot tar. As the fiber passes outward, metal rollers catch it, and the superfluous tar is pressed out. After leaving the tar-box behind, the yarn moves over a drum which has a cooling action. Then the yarns are drawn together into strands. A strand becomes left-handed as the man forming it works right-handed. In making the strands into ropes, one and one-half turns to the inch of yarn are given. This is done in the "walk." A man starts at the "former" and works down the walk, working right-handed, twisting the strands. As rope is made, pieces of each kind, six feet long, are cut off and tested. The requirements in a government test are that a six-inch piece shall hold 4,200 pounds and an untarred piece, 3,200 pounds. From five to six pounds are allowed to the fathom. The tarring of the yarns makes the rope less strong but more durable, especially that which is used in a ship's rigging.

Manila rope is made without hackling, and is oiled instead of tarred. In twisting ropes together to make a larger rope, a twist is given at each length, equal to the rope's circumference.

Hempel, Charles Julius.—Born in Prussia, 1811; died at Grand Rapids, Mich., 1879. A noted German-American physician. He emigrated to America in 1835, and after graduating at the University of New York in 1845, was appointed professor of materia medica and therapeutics in the Hahnemann Medical College, at Philadelphia, in 1857. He subsequently removed to Grand Rapids, Mich., where he practiced his profession. He was the author of a "System of Materia Medica and Therapeutics," etc.

Hen and the Pig, The.—See ANIMAL STORIES, 2744.

Henbane (*Hyoscyamus*).—A genus of plants belonging to the order Solanaceæ. The plant contains an alkaloid, *Hyoscyamine*, which is of medicinal value and is an active poison. When dropped into the eye the effect is the same as that of belladonna; it dilates the pupil.

Henderson, James Pinckney.—Born in N. C., 1808; died at Washington, D. C., 1858. He was secretary of state of Tex. (1837-39), governor of Tex. (1846-47) and U. S. senator (1857-58).

Hendricks, Thomas Andrews.—Born near Zanesville, Ohio, 1819; died at Indianapolis, Ind., 1885. He became member of Congress from Ind. (1851-55), U. S. senator (1863-69), governor of Ind. (1873-77), and unsuccessful Democratic candidate for Vice-president in 1876. He became Vice-president in 1884, and was inaugurated in 1885.

Hengist and Horsa.—Two Saxon brothers who, with a body of Jutes landed in Kent, England, about the year 450 A.D., to assist, as the tradition goes, Vortigern, an early British prince, to repel from Southern England incursions of the northern Picts. They were rewarded with the

gift of the island of Thanet. It is said, however, that Hengist and Horsa, Vortigern and Rowena, and Arthur and Modred, are all mythical heroes and heroines, whose existence historically may be questioned. There is reason, nevertheless, for believing that they were real personages, and that the accounts that have come down to our day of the adventurers said to have taken part in the early conquest of Britain are based upon historical facts, blended, no doubt, however, and in some degree, with romance.

Henley-on-Thames.—A town on the Thames in Oxfordshire, 36 miles from London, noted for its regattas. Pop., 4,913.

Hennepin, Louis.—(1640-1701.) A French missionary and explorer who traveled extensively in America in the west and along the Mississippi.

Henrici, Jakob.—Born in Bavaria, 1803; died at Economy, Pa., 1892. A German-American communist. On his arrival in America in 1823, he became a member of the Harmonist Society founded by George Rapp first at Harmony, and then removed to Economy, Pa. He was appointed manager of the Community on Rapp's death in 1868, a position he retained during his lifetime.

Henry I.—(1068-1135.) King of England (1106-35).

Henry II.—(1133-1189.) King of England (1154-89).

Henry III.—(1207-1272.) King of England (1216-72).

Henry IV.—(1367-1413.) King of England (1399-1413).

Henry V.—(1387-1422.) King of England (1413-22).

Henry VI.—(1421-1471.) King of England (1422-71).

Henry VII.—(1457-1509.) King of England (1485-1509).

Henry VIII.—(1491-1547.) King of England (1509-47).

Henry I.—(1011-1060.) King of France (1031-60).

Henry II.—(1519-1559.) King of France (1547-59).

Henry III.—(1551-1589.) King of France (1574-89).

HENRY IV. (OF NAVARRE).—(1553-1610.)

Henry of Navarre, born in 1553, was a dominant and interesting figure in one of the wildest periods of French history. His education was rough and hard, and fostered the originality of character which marked his life. At Bearn, he joined in the rough sports of the village lads. He was taught to be a true mountaineer, frugal and active. He was thrashed often, and studied some when not too busy with more active life. He was taught by a Protestant tutor. He received a military training under the great captain, Gaspard of Coligny.

After the death of Francis II. he went with his mother to join her husband at the French court. He was a favorite with Catherine, who admired his sharp eye, quick wit, and ready tongue. He doubtless learned much that was of greater use to a future ruler of men than Latin or Greek syntax. He went with the court on a tour through France, which lasted nearly two years. Thus he was learning men and geography by observation.

At the age of thirteen he returned to Bearn and, under the eye of his mother, resumed the hardy education of his childhood. He was

Henry IV. (of Navarre).—Continued

taught to live a frugal and active life, to endure fatigue and privation, to excel in riding and fencing, and to climb the rocks barefoot in pursuit of the chamois and bear. He also continued his classical studies under a new tutor.

By his early training and variety of influences he obtained a versatility and many-sided character which made him at home in the court, the cottage, and the camp. He saw all sides of life, all kinds of people, and both sides of religious and moral questions. He naturally became liberal, broad-minded, and conciliatory.

On Aug. 18, 1572, he married Margaret of Valois (the daughter of Catherine), a clever, talented, good-natured, kind-hearted woman, fond of reading (as well as of eating and perfumery), and a constant friend, but a fickle mistress who disliked the marriage that was forced upon her.

The wedding feast was a scene of debauchery, in which the king, his brothers, the Bourbon princes and the young nobles of both parties joined, while the older Protestants looked on with great repugnance. There were signs of an approaching storm. "The air was heavy with a feeling of disquiet, alarming reports spread on every side, and the pulpits of Paris re-echoed with exhortations to intolerance and bloodshed."

Henry's marriage furnished the occasion for the massacre of St. Bartholomew. All of the leading Huguenots had been invited to come to Paris for the event, and most of them had accepted. It was hoped that the wedding would result in peace between Huguenots and Catholics. But the marriage was no sooner over than trouble began. Priests denounced the unholy union of a Catholic with a heretic. The Duke of Guise was eager to take the life of Admiral Coligny, whom he believed to have caused the death of his father at the battle of Orleans. Catherine, seeking to control her irresolute son Charles, willingly entered into a plot to assassinate Coligny and other Protestant leaders. When her plot failed, she planned a darker and greater crime. Her tigress nature was fully aroused. In her desperation, she finally induced King Charles to consent to the slaughter. About two o'clock in the morning of August 24, the day of the solemn festival of St. Bartholomew, the church bell gave the signal, and the massacre began. Coligny was the first to fall. For three days the work of death continued, until the Seine was made red by the blood of many bodies. The slaughter also extended to most of the provinces. Henry of Navarre saved his life only by consenting to attend mass.

"It was indeed a strange stage on which this beardless youth, this king, with more nose than kingdom, as the courtier jested, was called to play his perilous part; still reeking with the blood of the tragedy just enacted, crowded with a motley crew of cutthroats, courtesans, and adventurers, elbowing nobles, ladies, and princes, who differed from them little in manners, dress,

or decency of life." It was in an atmosphere of corruption and evil, where a contemporary has said that everything was tolerated except decency and virtuous conversation.

In 1575, Henry escaped from the court and became the acknowledged leader of the Huguenots, keeping life in their dispirited forces by his daring bravery. By his joyousness and generosity he won the love of his followers and the respect of his opponents.

For seventeen years after the massacre of St. Bartholomew, France was in a state of turmoil and war. In 1576, the radical Catholics, who became angered when Henry III. granted privileges to the Huguenots, formed the Holy League with Henry the Duke of Guise, at its head. The purpose in forming the league was to suppress Protestantism and prevent the kingship from going to Henry of Navarre, who had now become the principal leader of the Huguenots. The "War of the three Henrys" followed, in which each leader quoted Scripture as a warrant for his cruelties and bloodshed. The armies of Henry of Navarre and of Henry III. finally united against the Duke of Guise, who held Paris. While advancing against the city, Henry III. was stabbed by a Dominican monk. While dying he made his chief men swear to support Henry of Navarre as his successor.

Thus, Henry of Navarre became Henry IV. the first Bourbon king of France. He found confusion, dissolution, and civil war everywhere. He was recognized as ruler in only a portion of his realm. He had to conquer a large portion of the country of which he was the lawful ruler. He entered upon his task with confident courage. He had the power of attracting a strong following, and of retaining the mastery in all situations of life. As a soldier, he had a happy and careless disregard for danger which is bred of the popular heroic spirit. He could excite the greatest enthusiasm among the impressive French people, who felt that he was under a lucky star. While he knew how to plunge into the tumult of battle with his soldiers and comrades, he knew how to adapt himself to all classes of men under all circumstances. He was simple, open-hearted, amiable and chivalrous. He joked, laughed, and sympathized with his friends, and showed an interest in the welfare of everybody. He gained men's favor more rapidly by a well-timed word and his ready wit than by the greatest victories on the battlefield. He could endure the greatest privations, and had an energy and strength which seemed to defy even his excesses. He exhibited both the dark and the bright sides of the national character; but amidst his countless love affairs he never forgot his duties as king. He was well adapted to revive the extinct loyalty of the nation.

He had a very difficult position; but he was able to look at things with a cooler head than the partisans around him. He was not a religious fanatic. He was fighting for his rights and for the unity of France. For a long time

Henry IV. (of Navarre).—Continued

he had all he could do to hold his many enemies in check. At one time he was in rags, and with hardly a horse to ride; but soon he led his troops to victory.

In 1593, in order to disarm the opposition against him, and secure peace to his distracted country, he accepted the Catholic faith. He treated the creed as an external cover for religion which could be put on or taken off like a coat. He was always liberal and tolerant. He was not made for a martyr in supporting the letter of a creed. By changing his creed he kept France from falling into an abyss. He gradually drew to himself those who had been his most violent enemies. In eight months he entered Paris amidst great joy. "So fair a city," said he, "was well worth a mass." Thus he soon broke up all opposition, and conquered France. He also managed to retain the confidence and following of the Huguenots, for whom he had fought for twenty years, and with whom he had shared distress, privation, danger, and victory.

As the leader of the true national party, he now devoted all of his energies to the good of France. In 1598 he issued the Edict of Nantes, which gave to the Huguenots the religious, civil, and political rights which they had so long demanded. With the help of Sully, his chief minister, he reorganized the finances, aided the restoration of agriculture, secured better means of communication, established manufactures, and promoted commerce. He was the friend of every farmer and trader, and desired prosperity to smile on the humblest. Wherever he went he was hailed with blessings as the "Father of his country."

Just as he was preparing to strengthen the power of France in European affairs, he was assassinated in the streets of Paris by the dagger of a fanatic. His death threw France back into confusion and convulsions for fifteen years, and lamed the arm of her foreign policy for half a lifetime.

Henry of Navarre was a good man when compared with the characters of his day. He was moderate and reasonable when others were excited by religious and political strife. He liked order and peace better than church quarrels. Though he may have "swallowed his words," he was true to his feelings. When he united with the Catholic Church and became king, he gave the Protestants privileges which they could not have gotten from any other king. He gave the Huguenots more political independence than they should have had. He pacified the country, and deserves great credit for it.

Though he had unbridled passions, he was a man of ready human sympathy, warm emotions, and boundless good temper. Though he was an expert at skilful flattery, he was much liked for the frankness with which he treated both friends and enemies, and for his openness in both public and private dealings. Though he was passionate by nature, he was not resent-

ful. "Nature made me hot-tempered," said he, "but anger is a bad counselor, and since I have known myself, I have always been on my guard against so dangerous a passion." He was ready to forgive, and hated both cruelty and vindictiveness.

"No king's memory has ever been more affectionately cherished by the French people."

Henry I., "The Fowler."—(876-936.) King of Germany (919-36).

Henry II.—(972-1024.) Emperor of the Holy Roman Empire.

Henry III., "The Black."—(1017-1056.) Emperor of the Holy Roman Empire (1046-56).

Henry IV.—(1050-1106.) Emperor of the Holy Roman Empire (1084-1106).

Henry V.—(1081-1125.) Emperor of the Holy Roman Empire (1111-25).

Henry VI.—(1165-1197.) Emperor of the Holy Roman Empire (1191-97).

Henry VII.—(1262-1313.) Emperor of the Holy Roman Empire (1312-13).

Henry, Joseph.—A notable American physicist and experimenter in electrical science, was born in 1797 and died in 1878. For over 30 years he administered the affairs of the Smithsonian Institution at Washington, D. C., and he may be said to have anticipated Faraday in some of his electrical demonstrations. To Henry at least is due the important discovery of self-induction, besides other extensions as well as verifications of Faraday's observations in the phenomena of electro-magnetism. Henry was of much service to the great electrician, Morse, in making use of the principle of the Henry electro-magnet and in utilizing the armature as a recording instrument. He has left a collection of important papers, and a work entitled "Contributions to Electricity and Magnetism."

Henry, Patrick.—Statesman and orator; sketch of, 283.

"**Henry Esmond.**"—The title of Thackeray's great historical novel, written in 1852.

Hensel, Madame (FANNY CECILE MENDELSSOHN-BARTHOLDY).—(1805-1847.) A pianist and composer, elder sister of Felix Mendelssohn.

Hensel, Wilhelm.—(1794-1861.) A German historical painter. He married Fanny Mendelssohn (1829).

Henshaw, John Prentiss Kewley.—Born at Middletown, Conn., 1792; died near Frederick, Md., 1852. A bishop of the Protestant Episcopal Church in America. He was appointed bishop of R. I. and rector of Grace Church, Providence, in 1843. He wrote a number of theological works, also "Hymns," etc.

Henty, George Alfred.—Born 1832. An English novelist, best known as a writer of books for boys.

Hentz, Mrs. (CAROLINE LEE WHITING.)—Born at Lancaster, Mass., 1800; died at Marianna, Fla., 1856, noted as a novelist. She was the author of "Aunt Patty's Scrap-Bag," "The Mob-Cap," etc.

Hepaticæ, or Liverworts.—2935.

Hepburn, James.—Fourth Earl of Bothwell and husband of Mary Queen of Scots. (1536-1578.)

- Hepburn vs. Griswold.**—One of the Supreme Court cases involving the constitutionality of the issue of U. S. legal-tender notes. June 20, 1860, Mrs. Hepburn promised to pay Mr. Griswold \$11,250 on Feb. 20, 1862. At that time gold and silver only were legal tender. Feb. 25, 1862, the U. S. issued \$150,000,000 of its own notes to be received as lawful money in payment of all debts, public and private, within the U. S. This was five days after the note became due. Mrs. Hepburn, in Mar., 1864, after suit had been brought, tendered these notes in payment and they were refused. The notes were then tendered and paid into court, in Louisville, Ky. The Louisville court of chancery declared the debt absolved. The Ky. court of errors and appeals reversed the chancellor's judgment, and the U. S. Supreme Court, at the Dec. term, 1867, affirmed the judgment of the court of errors and appeals. This ruling was afterward reversed. (See *JULLIARD vs. GREENMAN*.)
- Hephæstus.**—The Greek deity corresponding to the Roman Vulcan, the god of fire and metallic arts.
- Heptagon.**—A seven-sided and seven-angled plane figure. When all the sides and angles are equal the figure is a regular heptagon. It has proved an impossible problem to inscribe or to circumscribe a heptagon in or about a circle.
- Heptarchy.**—A name used to indicate the form of government of the early English kingdoms prior to 827, when Egbert became king of all England. The states included Kent, Mercia, Wessex, East Anglia, Northumbria (Bernicia and Deira), and Sussex.
- Hepworth, George Hughes.**—Born at Boston, Mass., 1833. A clergyman and literary writer. At first a member of the Unitarian Church, he became a Presbyterian and eventually accepted an appointment on the New York "Herald." He wrote "The Whip, Hoe, and Sword," "The Criminal, the Crime, the Penalty," etc.
- Hera.**—The Greek divinity corresponding to the Roman Juno, goddess of heaven, sister and wife of Zeus or Jupiter.
- Herat.**—A city in Afghanistan of such strategic importance as to be regarded as the "Key of India." It has sustained more than 50 sieges. Population, about 30,000.
- Herbarium.**—A classified collection of plants, 2805.
- Herbert, George.**—(1593-1633.) An English poet.
- Herbert, Henry William (FRANK FORESTER).**—(1807-1858.) An author of miscellaneous writings, novels, translations, etc.
- Herb Robert, The.**—2896.
- Herculaneum.**—An ancient city of Italy, 6 miles from Naples, which with Pompeii was buried in 79 A.D. by an eruption of Mt. Vesuvius. Recent excavations have brought to light most interesting remains.
- Hercules.**—See GREEK AND ROMAN MYTHOLOGY, 1623.
- Hercules, Pillars of.**—The ancient name of the two rocks at the entrance from the Atlantic into the Mediterranean Sea. That on the north is Gibraltar and that on the south is Ceuta.
- Heredity.**—A tendency, manifested by an organism (whether it be that of man or animal) to develop in the likeness of its progenitor and transmit that progenitor's qualities. Strictly speaking, it is the transmission of physical and mental characteristics from parent to offspring—but how the law acts is not known, nor do we know the actual seat of the transmitting power or tendency. Its operation in the structure and through the potentialities of the brain, or physical frame of man, would indicate that the principle or acting-power is imbedded in the species, either in the cell structures or in some mode of action through them, so that its effects reproduce themselves as if by some inexorable law.
- Herkimer, Nicholas.**—Died, 1777. A distinguished Revolutionary general of German extraction. In 1777 he, while in command of the Tryon Co. militia, relieved Fort Stanwix on the Mohawk River which was besieged by the British. In Aug. of the same year he defeated the British detachment in Oriskany where he was wounded in battle and died in consequence of an unskillful surgical operation.
- Herkomer, Hubert.**—Born, 1849. An English genre, portrait, and landscape painter.
- Hermes.**—The Greek name for the deity corresponding to the Roman Mercury.
- Hermitage, The.**—The name given by Andrew Jackson to his home, situated about 10 miles from Nashville, Tenn., near the Cumberland River. Here President Jackson died and was buried. The place has become the property of the state of Tenn., and has been converted into a state home for aged, indigent, or disabled ex-Confederate soldiers. (See *JACKSON, ANDREW*, 315.)
- Herndon, William Lewis.**—Born at Fredericksburg, Va., 1813; died, 1857. A naval officer. Along with Lieutenant Lardner Gibbon, he explored the Amazon River and its Peruvian tributaries, the results of which exploration were published by the U. S. Government as "Exploration of the Valley of the Amazon." Subsequently he became connected with the Panama mail S. S. Co. and perished in the wreck of the "Central America" which foundered in a cyclone.
- Hero.**—A mathematician of the 3d century B.C. who lived at Alexandria. He was the inventor of "Hero's fountain," a piece of physical apparatus to demonstrate the pressure and elasticity of air.
- Herod I.**—"The Great." King of Judea 40-4 B.C.
- Herodotus.**—An early Greek historian, styled "the Father of History," who lived between the years 484 and 424 B.C. He was a man of much learning and well acquainted, by travel, with all of the historic parts of Greece and with Egypt and Palestine. His history, which was in nine books, named after the nine Muses, recites a delightful narrative of the Persian invasion of Greece down to the year 479 B.C. It is full of interesting episodes, the work of an intelligent and shrewd observer, and is known to be honest and faithful in the historic facts the

- author relates. See Rawlinson's translation of Herodotus.
- Heron, Matilda.**—Born in Ireland, 1830; died at New York, 1877. A noted Irish-American actress. When quite young she made her début at Philadelphia (1851) as "Bianca" in "Fazio." She was married to Robert Stoepel, a musician, in 1857 and divorced in 1869. She has one daughter, Bijou, also an actress, born at New York, 1863.
- Heron, The.**—2611.
- Herrick, Robert.**—(1591-1674.) An English lyric poet.
- Herring, John Frederick.**—(1795-1865.) An English painter of horses.
- Herring, The.**—2686.
- Herschel, Sir William.**—A distinguished English astronomer (born 1738, died, 1822), the discoverer of the planet Uranus and two of its satellites, also the discoverer of two of the satellites of Saturn. In 1789, he erected at Slough, near Windsor, a great reflecting telescope of over 39 feet focal length, which largely aided him in his discoveries, afterward communicated to the Royal Society. In 1782 he was appointed astronomer to the English court. "In nearly every branch of modern physical astronomy he was a pioneer—the virtual founder of sidereal science. As an explorer of the heavens he had but one rival—his son." The latter, known as SIR JOHN F. W. HERSCHEL (b. 1792, d. 1871), did much in England also to advance astronomical science, continuing his illustrious father's work and researches. In 1834, he proceeded with his instruments and a reflecting telescope, which he designed and constructed, to the Cape of Good Hope, where he made many important observations of the heavens, the results of which he afterward published, together with an "Outline of Astronomy," "Familiar Letters on Scientific Subjects," and a work on the "Study of Natural Philosophy."
- Hertz, Henrik.**—(1798-1870.) A Danish poet and dramatist.
- Herzegovina.**—A district of Europe the government of which is administered by Austria-Hungary. It touches Bosnia, Montenegro, and Dalmatia.
- Hesiod.**—A celebrated Greek poet who lived about 735 B.C.
- Hesperides, The.**—In Greek mythology, maidens, the daughters of Night, according to Hesiod, who guarded the golden apples which Gæa (Earth) caused to grow as a marriage gift for Hera, Queen of Heaven, who was to marry Zeus (Jupiter). They are usually spoken of as three in number, and their abode was an island of the ocean on the western edge of the world. They were gifted with the faculty of song. The apples were stolen by Hercules and given by him first to Eurystheus and afterward to Athene (Minerva) by whom they were restored to the garden of the Hesperides.
- Hesperus.**—In Greek mythology, the deified evening star.
- Hess, Peter von.**—(1792-1871.) A celebrated German painter of genre and battle scenes.
- Hessian Fly** (*Cecidomyia destructor*).—An insect, the larva of which has proved extremely destructive to wheat in America. It is of a black color; the wings are dusky, darker near the body; the legs are pale brown; the feet, black; and the antennæ are hairy.
- Hessians.**—The inhabitants of Hesse, a district in Germany. During the Revolutionary war Great Britain employed a number of Hessian troops to serve against the colonies.
- Hewitt, Abram Stevens.**—Born at Haverstraw, N. Y., 1822, son-in-law of Peter Cooper. He was elected Democratic member of Congress from N. Y. (1875-79 and 1881-86), and became mayor of New York (1887-88).
- Hewitt, John Hill.**—Born at New York, 1801; died at Baltimore, Md., 1890. A writer, noted as the author of the ballad "The Minstrel's Return from the War," etc.
- Hexagon.**—A six-sided and six-angled plane figure. When all the sides and angles are equal the figure is called a regular hexagon, 3952.
- Hexameter.**—A line in poetry composed of six feet. Such is the measure used by Virgil in the "Æneid."
- Hexandrous.**—A botanical term used to indicate that a plant has six stamens.
- Heywood, Thomas.**—A celebrated English dramatist and miscellaneous writer who lived in the middle of the 17th century.
- H. H.**—Pseudonym of Mrs. Jackson, later Mrs. Hunt.
- Hibernia.**—The name given to Ireland by ancient writers.
- Hickey Plot.**—A conspiracy headed by Thomas Hickey, one of George Washington's life guards, to assassinate the general at N. Y., in 1776. The plot was discovered, Hickey was hanged in June, 1776, and David Matthews, mayor of N. Y., was imprisoned for his connection with the affair.
- Hickory, Old.**—A sobriquet applied to Gen. Andrew Jackson because of the strength of his character.
- Hickory Pole Canvass.**—The so-called presidential canvass of 1828, in behalf of Jackson.
- Hickory Tree, The.**—2851.
- Hicks-Beach, Sir Michael Edward.**—Born 1837. An English baronet and Conservative politician.
- Hidalgo de Cisneros y Latorre, Baltazar.**—(1755-1829.) A Spanish general and administrator.
- Hierapolis.**—(1) An ancient city of Phrygia, Asia Minor; the modern Pambuk Kalessi. (2) An ancient city of Syria.
- Higginson, Thomas Wentworth.**—Born at Cambridge, Mass., 1823. An American author; a noted opponent of slavery. He relinquished the ministry in 1858 and became colonel of the first colored regiment in the Civil War.
- High-bridge.**—Built in 1840 at 175th St. in New York City. It carries the Croton aqueduct across the Harlem River into the city. Its length is 1,460 ft. and it has 13 granite arches each of which is 116 ft. high.
- Highest Type of Girl, The.**—2241.
- Highlands of the Hudson.**—A series of hills and small mountains in eastern N. Y., among which Fishkill Mountain, Storm King, Crow's Nest, Anthony's Nose, and West Point are the most prominent.

High License.—A term generally used to denote a high tax on a seller of intoxicating liquors. The objects of high license are to increase the price of liquor to some extent so as to limit its consumption and place its sale on a more respectable basis, and to collect by a tax on the traffic a large revenue for public purposes. Several states have passed high license laws and some communities have in addition placed local restrictions on the traffic in intoxicants.

High Seas.—"High seas" means the open sea, including the whole extent of sea so far as it is not the exclusive property of any particular country. The rule of international law is that every country bordering on the sea has the exclusive sovereignty over such sea to the extent of three miles from its shores; but all beyond, not within three miles of some other country, is open or common to all countries. The part of sea within three miles' distance is generally called the territorial sea of the particular country. The Non-importation Act was passed by Congress on March 26, 1806, to prohibit the importation of British manufactures into the United States. The immediate cause of this prohibition was the annoyance caused by the "Leander" cruising off New York, and insisting on searching American vessels under pretense of looking for deserters. In one of these searches, an American sailor, named Pearce was killed, and the hostility of the states, which had long been smoldering, burst into a blaze.

"High-water Mark of the Rebellion."—A popular phrase applied to the battle of Gettysburg, July 1-3, 1863. This point marked the beginning of the gradual falling away of the Confederate cause. Its decadence was regular and constant, by reason of the scant resources of men and munitions, although it was nearly two years before the end came at Appomattox. The Confederate cause never recovered from the blow it received at Gettysburg, made doubly severe by the surrender of Pemberton to Grant at Vicksburg, on the day that Lee was hastening back to the Potomac, that he might recross into Virginia.

Hill, Ambrose Powell.—(1825-1865.) An American general.

Hill, Daniel Harvey.—Born in N. C., 1821; died, 1889. A general in the Confederate army. He entered the U. S. army early in life and served with distinguished gallantry in Mexico; resigned in 1849 to become professor of mathematics in Washington College at Lexington, Va., and later Supt. of the N. C. Military Academy at Charlotte; entered the Confederate service at the outbreak of the Civil War as colonel of the 1st N. C. regiment and in 1863 reached the rank of lieut.-gen.; held commands in Lee's army till 1863 when he went to Bragg's army in Tenn. and was at Chickamauga; continued in service till the end and was with "Joe" Johnston when the latter surrendered to Sherman, in N. C. (April, 1865). After the war he edited "The Land We Love" at Charlotte, N. C.; was then called to the presidency of the University

of Ark., and later was president of the Agricultural and Military College of Ga. He had high scholarly attainments.

Hill, David Bennett.—Born at Havana, N. Y., 1843. An eminent lawyer and Democratic politician. He became lieut.-gov. of N. Y. in 1882, and governor on the election of Cleveland to the presidency. He was elected governor in 1885 and 1888; became U. S. senator in 1891, and was defeated for governor in 1894.

Hill, Sir Rowland.—(1795-1879.) The author of the penny postal system in England.

Hiller, Ferdinand.—(1811-1885.) A distinguished German composer, pianist, and writer on music.

Hiller, Johann Adam.—(1728-1804.) A German composer; founder of what are now known as the Gewandhaus concerts.

Hilliard, Henry Washington.—(1808-1892.) American general and statesman; member of Congress from Ala. (1845-51), and was appointed by Jefferson Davis as Confederate commissioner to Tenn.; brig.-gen. in the Confederate army; U. S. minister to Brazil (1877-81).

Hilliard, Nicholas.—3466.

Himalayas (meaning "snow-abodes").—A range of mountains in south-central Asia that bounds the peninsula of India on the north, from Afghanistan to Burma, separating it from Tibet. In the range there are over forty peaks known to be higher than any in the rest of the world, their average elevation being from 16,000 to 18,000 feet. Mount Everest in Nepal reaches a height of 29,000 feet above the sea. The limit of perpetual snow varies on north and south, the average being about 17,000 feet. In the Himalayas rise the Gauges, Jumna, Sutlej, Indus, and Brahmaputra rivers. The highest of the passes across the range is the Parang Pass, at a height of 18,500 feet; even at this high elevation, or near to it, are to be found monasteries, permanently inhabited, while cities are met with at an elevation of 12,000 feet.

Hindoo Fables.—1367.

Hindoo Fairy Tales.—1217.

Hindoo Mythology.—1521.

Brahm, 1522.

Brahma and Saraswati,

1523.

Vishnu and Lakshmi,

1526.

Siva, 1535.

Parvati, 1538.

Indra, 1540.

Ganesa, 1546.

Surya, Aruna, and Chandra, 1546.

Elemental Gods, 1549.

Yama, 1550.

Kama, 1550.

Hindustan, or Hindustan ("the land of the Hindus").

—A term applied sometimes to the whole of India, but more properly restricted to the region bounded by Bengal on the east and the Punjab on the west, that is the extensive plain which lies between the Himalayas on the north



and the Vindhya Mountains on the south. Here, in the upper valley of the Ganges, was the center of Mohammedan rule and the early home of the Sanskrit-speaking peoples. It now embraces the British N. W. provinces of Oudh and Behar, the seat of the cities Benares, Lucknow, Simla, Agra, Delhi, and Lahore. (See INDIA.)



HINDOO FAIRY TALES

Hindu Kush.—A western continuation of the Himalaya Mountains, lying for the most part in Afghanistan and Kafiristan. The highest point is about 24,000 feet.

Hippocrates.—Born about 460 B.C.; died about 377. A celebrated Greek physician.

Hippolyte.—A mythological queen of the Amazons.

Hippopotamus.—2470.

Hirsch, Baron Maurice de (Baron MAURICE DE HIRSCH DE GEREUTH).—(1831-1896.) An Austrian financier, capitalist, and philanthropist.

Hoar, Ebenezer Rockwood.—(1816-1895.) Son of Samuel Hoar. He was judge of the Mass. supreme court (1859-69); U. S. attorney-general (1869-70); joint-high commissioner on the treaty of Washington (1871), and member of Congress from Mass. (1873-75).

Hobart, Garret Augustus.—(1844-1899.) An American lawyer and politician; elected Vice-president 1896.

Hobbema, Meindert.—3505.

Hobbes, John Ollver.—The pseudonym of Mrs. Craigie, an English novelist.

Hobbes, Thomas.—(1588-1679.) A celebrated English philosopher.

Hobkirk's Hill (S. C.), **Battle of.**—Apr. 25, 1781, Lord Rawdon with about 950 British made a sudden attack on the Americans under Gen. Greene at Hobkirk's Hill, two miles north of Camden, S. C. The American force consisted of 1,446 men. Greene was defeated, but both armies withdrew from the field. The British lost 258, in killed,

wounded, and missing. The total casualties on the American side was 271.

Hoboken.—A city in N. J. on the Hudson River. It is the seat of the Stevens Institute of Technology, and the terminus of several steamship and railway lines. Pop. (1900), 59,364.

Hobson, Richmond Pearson.—Born at Greensboro, Ala., 1870. A naval officer distinguished for his bravery in the Cuban War.

Hobson's Choice.—Tobias Hobson, the first carrier of Cambridge University, England, and keeper of a livery-stable, always obliged his patrons to take the horse nearest the door of the stable. The expression (Hobson's Choice) has passed into a saying, which implies "this or none." Hobson died in 1631.

Hoe, Richard March.—(1812-1886.) An American inventor, noted for his inventions in connection with the printing-press.

Hoffmann, August Heinrich.—(1798-1874.) A noted German poet, philologist, and literary historian.

Hogarth, Willam.—3467.

Hogg, James.—(1770-1835.) A noted Scottish poet; sometimes called "The Ettrick Shepherd."

Holbein, Hans, "The Elder."—(1460-1524.) A noted German historical painter, 3515.

Holberg, Ludwig von.—(1684-1754.) A celebrated Danish author and dramatist.

Holder.—He who is in possession of a bill or note.

Holidays in the Various States, Legal.—

JAN. 1. NEW YEAR'S DAY: In all the states (including the District of Columbia) except Massachusetts, Mississippi, and New Hampshire.

JAN. 8. ANNIVERSARY OF THE BATTLE OF NEW ORLEANS: In Louisiana.

JAN. 19. LEE'S BIRTHDAY: In Florida, Georgia, North Carolina, South Carolina, and Virginia.

FEB. 12. LINCOLN'S BIRTHDAY: In Connecticut, Illinois, Minnesota, New Jersey, New York, North Dakota, Pennsylvania, and Washington (state).

FEB. (Third Tuesday). SPRING ELECTION DAY: In Pennsylvania.

FEB. 22. WASHINGTON'S BIRTHDAY: In all the states (including the District of Columbia) except Mississippi.

FEB. 27. MARDI-GRAS: In Alabama and the parish of Orleans, Louisiana.

MAR. 2. ANNIVERSARY OF TEXAN INDEPENDENCE: In Texas.

APRIL 4. STATE ELECTION DAY: In Rhode Island.

APRIL 6. CONFEDERATE MEMORIAL DAY: In Louisiana.

APRIL 13. GOOD FRIDAY: In Alabama, Louisiana, Maryland, Pennsylvania, Tennessee.

APRIL 19. PATRIOTS' DAY: In Massachusetts.

APRIL 21. ANNIVERSARY OF THE BATTLE OF SAN JACINTO: In Texas.

APRIL 26. CONFEDERATE MEMORIAL DAY: In Alabama, Florida, and Georgia.

MAY 10. CONFEDERATE MEMORIAL DAY: In North Carolina and South Carolina.

MAY (Second Friday). CONFEDERATE DAY: In Tennessee.

MAY 20. ANNIVERSARY OF THE SIGNING OF THE MECKLENBURG DECLARATION OF INDEPENDENCE: In North Carolina.

MAY 30. DECORATION DAY: In all the states and territories (and District of Columbia), except Alabama, Arkansas, Florida, Georgia, Idaho, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Texas, and Virginia.

JUNE 3. JEFFERSON DAVIS'S BIRTHDAY: In Florida and Georgia.

JULY 4. INDEPENDENCE DAY: In all the states and the District of Columbia.

JULY 24. PIONEERS' DAY: In Utah

AUG. 2. ELECTION DAY: In North Carolina — for state officers, legislature, county officers, etc.

AUG. 16. BENNINGTON BATTLE DAY: In Vermont.

SEPT. 3. LABOR DAY: In all the states and territories (and District of Columbia), except Arizona, Arkansas, Louisiana, Mississippi, Nevada, New Mexico, North Carolina, North Dakota, Oklahoma, and Vermont. Is observed in Wyoming, but is not a legal holiday.

SEPT. 6. LABOR DAY: In North Carolina.

SEPT. 9. ADMISSION DAY: In California.

NOV. 1. ALL SAINTS' DAY: In Louisiana.

NOV.—GENERAL ELECTION DAY: In Arizona, California, Colorado, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, West Virginia, Washington, Wisconsin, and Wyoming, in the years when elections are held in these states. In 1900, the date was November 6.

NOV. 25. LABOR DAY: In parish of Orleans, Louisiana.

NOV. THANKSGIVING DAY (either the fourth or last Thursday in November, as the President may determine): Is observed in all the states, and in the District of Columbia, though in some states it is not a statutory holiday.

DEC. 25. CHRISTMAS DAY: In all the states, and in the District of Columbia.

Sundays and fast days are legal holidays in all the states which designate them as such.

There are no statutory holidays in Mississippi and Nevada, but by common consent the Fourth of July, Thanksgiving, and Christmas are observed as holidays in Mississippi. In Kansas, Decoration Day, Labor Day, and Washington's Birthday are the only legal holidays by legislative enactment; other legal holidays are so only by common consent. In New Mexico, Decoration Day, Labor Day, and Arbor Day are holidays when so designated by the governor.

ARBOR DAY is a legal holiday in Arizona, Minnesota, North Dakota, Wisconsin, and Wyoming, the day being set by the governor; in

Texas, February 22; in Nebraska, April 22; Montana, May 8; Utah, April 15; Rhode Island, May 11; Florida, first Friday in February; Georgia, first Friday in December; Colorado (school holiday only), third Friday in April; Idaho (school holiday only), first Friday after May 1.

Every Saturday after 12 o'clock noon is a legal holiday in New York, New Jersey, North Carolina, Pennsylvania, Maryland, Tennessee, Virginia, and the city of New Orleans, and in Newcastle County, Del., except in St. George's Hundred; in Louisiana and Missouri in cities of 100,000 or more inhabitants; in Ohio in cities of 50,000 or more inhabitants; and June 1 to August 31 in Denver, Col. In the District of Columbia for all purposes respecting the presentation for payment or acceptance, or the protesting of all commercial paper whatsoever. In Connecticut and Maine, banks close at 12 noon on Saturdays.

There is no national holiday, not even the Fourth of July. Congress has at various times appointed special holidays. In the second session of the Fifty-third Congress it passed an act making Labor Day a public holiday in the District of Columbia, and it has recognized the existence of certain days as holidays, for commercial purposes, but, with the exception named, there is no general statute on the subject. The proclamation of the President designating a day of Thanksgiving only makes it a legal holiday in those states which provide by law for it.

Holidays, Old English.—These holidays, with their names, had their origin in mediæval England when the state religion was that of the Church of Rome, and they are still observed generally in some parts of England, Scotland, and Ireland.

JAN. 6. TWELFTH DAY, or Twelfth-tide, sometimes called Old Christmas Day, the same as Epiphany. The previous evening is Twelfth Night, with which many social rites have long been connected.

FEB. 2. CANDLEMAS: Festival of the Purification of the Virgin. Consecration of the lighted candles to be used in the church during the year.

FEB. 14. OLD CANDLEMAS: St. Valentine's Day.

MAR. 25. LADY DAY: Annunciation of the Virgin. April 6 is old Lady Day.

JUNE 24. MIDSUMMER DAY: Feast of the Nativity of John the Baptist. July 7 is old Midsummer Day.

JULY 15. ST. SWITHIN'S DAY. There was an old superstition that if rain fell on this day it would continue forty days.

AUG. 1. LAMMAS DAY: Originally in England the festival of the wheat harvest. In the church, the festival of St. Peter's miraculous deliverance from prison. Old Lammas Day is August 13.

SEPT. 29. MICHAELMAS: Feast of St. Michael, the Archangel. Old Michaelmas is October 11.

NOV. 1. ALLHALLOWMAS: All-hallows, or All Saints' Day. The previous evening is All-hallow-e'en, observed by home gatherings and old-time festive rites.

NOV. 2. ALL SOULS' DAY: Day of prayer for the souls of the dead.

NOV. 11. MARTINMAS: Feast of St. Martin. Old Martinmas is November 23.

DEC. 28. CHILDERMAS: Holy Innocents Day. Lady Day, Midsummer Day, Michaelmas, and Christmas are quarter (rent) days in England, and Whitsunday, Martinmas, Candlemas, and Lammas Day in Scotland.

Shrove Tuesday, the day before Ash Wednesday, and Maundy Thursday, the day before Good Friday, are observed by the church. Mothering Sunday is Mid-Lent Sunday, in which the old rural custom obtains of visiting one's parents and making them presents.

Holland, or The Netherlands (its official name), is a kingdom and ancient maritime nation in Western Europe. It is situated to the west of Prussia and to the north of Belgium, and has an area, besides its colonies, of 12,648 square miles, with a population of 5,104,000. Its chief cities are Amsterdam, Rotterdam, The Hague (the seat of the government), Utrecht, Haarlem, etc. The present reigning sovereign, who is of the House of Orange, is Queen Wilhelmina, born in 1880, and succeeded to the throne in 1890. The government is an hereditary constitutional monarchy; it has had a varied and troubled history, having at times been a possession of England, annexed by France, erected into a Batavian republic, united with and afterward separated from Belgium. The first constitution of the country after its reconstruction as a separate kingdom was given it in 1815, and has since been revised, in 1848 and again in 1887. Its people are generally called Dutch, and are of the Germanic race. The area of its colonial possessions is 736,400 square miles, with an estimated population of over 34 millions.

Holland, George.—(1791-1870.) A noted Anglo-American comedian.

Holland, Josiah Gilbert.—Author; sketch of, 288.

Holland Patent.—A grant of land made in 1686 by Governor Dongan of N. Y., to six Dutch patentees. The land was situated in what is now Orange County, N. Y., and was to be held in free and common socage of King James II.

Hollar, Wenceslaus.—(1607-1677.) A distinguished engraver; born in Prague, but spent his life largely in England.

Hollins, George Nichols.—(1799-1878.) An American naval officer. He served under Decatur in the Algerian War (1815) and became commander in 1844. In 1861 he resigned and accepted a commission as commodore in the Confederate navy.

Holly, The.—2816.

Hollyhock.—A plant of the Mallow family, with a tall, straight stem; heart-shaped, wrinkled leaves, five to seven in number, bearing large, showy axillary, almost stemless flowers.

Holm, Saxe.—The pseudonym of the unknown author of a number of stories published about 1874.

Holmes, Oliver Wendell.—Author; sketch of, 292.

Holstein.—In Prussia, the southern part of the province of Schleswig-Holstein.

Holt, Joseph.—(1807-1894.) An American statesman and jurist. He was Secretary of War for a time in 1861 and was then appointed judge-advocate-general of the U. S. army, with the rank of brigadier, which position he held during and after the Civil War. He took a conspicuous part in the war and reconstruction periods.

Holy Alliance, The.—A league ratified at Paris, Sept. 26, 1815, between the sovereigns of Russia, Austria, and Prussia; its object the perpetuation of peace. The alliance was joined afterward by the sovereigns of all European countries except Rome and England; it terminated after the French revolution of 1830.

Holy Grail.—See ARTHURIAN LEGEND, 1790.

Holy Grail.—See GRAIL, HOLY, and 2366.

Holy Land.—See PALESTINE.

Holyoke.—A city in Mass., situated on the Conn. River. The center of a large paper-manufacturing industry. Pop. (1900), 45,712.

Holy Roman Empire.—That empire ruled over by the emperor claiming to be the representative of the ancient Roman Empire, and as such asserted, in theory, authority over western and central Europe. It was called "holy" by reason of the close relations between state and church. It was founded by Charlemagne, who was so crowned on Christmas Day, 800.

Holyrood Palace.—In Edinburgh, Scotland, a royal palace, founded in 1128.

Homburg.—In Prussia, a town of the province of Hesse-Nassau. It is a popular health resort, being noted for its medicinal springs.

Home Counties.—The counties containing, and immediately surrounding, London, England. They are Middlesex, Surrey, Kent, Essex, and Hertford.

Home Development.—2173.

Homer.—The earliest and greatest of the epic poets of Greece, and the reputed author of the "Iliad" and the "Odyssey." He is supposed to have lived 900 years before the birth of Christ, and when old and blind to have wandered from city to city rehearsing his verses. No fewer than seven cities contend with each other for the honor of giving him birth within their walls. He is reckoned the prince of minstrels; his verse being pervaded by solemn grandeur and by intense national feeling, as well as by great pictorial ornamentation, virtues that have given to the "Iliad" especially the character of a psalter or sacred writing in the eyes of the Greeks. Pope's translation of Homer still holds its high place.

Homer Legends, The.—1715.

Homer, Winslow.—Born at Boston, 1836; an eminent American painter.

Homestead.—A town in Pa. near Pittsburg, noted for its manufactures of steel plates and rails. In 1892 it was the scene of a strike which was attended with much rioting and bloodshed. Pop. (1900), 12,554.

Homestead Law.—A law enacted by Congress May 20, 1862. It provided that any citizen might, on

- payment of the nominal fee of \$5 or \$10 enter upon and hold any unappropriated quarter-section of the public lands, valued at \$1.25 per acre, or any one-eighth section valued at \$2.50 per acre, and after five years' residence thereon, become the sole owner. This measure proved of great value in the settlement of lands of the west. Tens of thousands of persons in this way secured homes for their families, and by their industry and thrift, began the development of the boundless agricultural and mineral resources of the great west, and started it upon its marvellous era of prosperity.
- "Home, Sweet Home."**—A popular song, the words of which were written by John Howard Payne. The music is attributed to Sir Henry Rowley Bishop (1786-1855).
- Home Study of Art, The.**—2373.
Oil Color Painting, 2378.
Water Color Painting, 2380.
China Painting, 2382.
Pottery, 2387.
Painting on Silk, 2396.
Painting on Velvet, 2397.
Modeling in Clay and Wax, 2399.
- Honduras.**—A republic of Central America, situate to the southeast of British Honduras, and surrounded by Guatemala, San Salvador, Nicaragua, and the Caribbean Sea. Early in its history it was conquered by the Spanish, and between the years 1823-39 it was a state in the Central American Union, since when it has been independent. Its area is 46,400 square miles, with an estimated population of about 407,000, mostly aborigines, with a sprinkling of Spanish-speaking whites. It has ports on the Pacific and the Atlantic; its capital, Tegucigalpa, is in the center of the state. It has large mineral resources, though they are not much worked; its chief exports are, besides metals, hides, fruits, indigo, and cabinet woods.
- Honduras, Bay of.**—An inlet of the Caribbean Sea lying north of Honduras.
- Hone, William.**—(1779 or 80-1842.) An English writer and political satirist.
- Honest Collie, An.**—See ANIMAL STORIES, 2737.
- Honeybee, The.**—See BEE, 2765.
- Honey-Guide, The.**—2582.
- Honeysuckle, The.**—2899.
- Hong-Kong.**—An island and English crown colony on the southeast coast of China, 90 miles south of Canton. It is the great center for British commerce with China and Japan, and a military and naval station of the first importance. Its affairs are administered by a governor, aided by an executive council. The area of the colony is about 30 square miles, its capital is Victoria, which extends for upward of four miles along the south shore of the beautiful and commodious harbor. The population of Hong-Kong, including the military and naval establishments, is about 250,000, of which probably 10,000 are Europeans. In 1898, China leased to Great Britain portions of her territory adjacent to Hong-Kong, including the port of Kaulung and the waters of Mirs Bay, and Deep Bay. This area (400 sq. miles in extent), the British occupied in the following year. Estimated population in 1898, 254,400.
- "Honi soit qui mal y pense"** ("Evil to him who evil thinks").—According to tradition, the countess of Salisbury lost her garter at a court ball and King Edward III. presented it to her with the above words. They were adopted afterward as the motto of the Order of the Garter.
- Honiton.**—In Devonshire, England, a town noted for its manufacture of lace.
- Honolulu.**—The capital of the Hawaiian Islands, and their chief seaport and commercial town. Pop., 39,306.
- Honor.**—To accept or pay a draft, bill, or note.
- Hooch, Pieter de.**—Dutch painter, 3502.
- Hood, John Bell.**—Soldier; sketch of, 295.
- Hood, Mount.**—One of the highest summits of the Cascade Range in Ore., about 11,200 ft. high.
- Hood, Robin.**—In English tradition, an outlaw and popular hero.
- Hood, Thomas.**—(1798-1845.) A famous English poet and humorist.
- Hooft (hōft), Pieter Corneliszoon.**—(1581-1647.) A noted Dutch poet and dramatist.
- Hooghly or Hugli.**—The western channel of the Ganges River; Calcutta is situated on it. Its length is 145 miles.
- Hook, Theodore Edward.**—(1788-1841.) A famous English humorist and author.
- Hooker, Joseph.**—Born at Hadley, Mass., 1814; died at Garden City, N. Y., 1879. A distinguished soldier. He was educated at West Point, was a captain in the Mexican War, and was made a brig.-gen. at the beginning of the Civil War; commanded a division of the Army of the Potomac in the Peninsula campaign and a corps at South Mountain, Antietam, and Fredericksburg; Jan. 26, 1863, he succeeded Burnside in the command of the Army of the Potomac and with 120,000 men fought the great battle of Chancellorsville (May 2-4), where he was defeated. Lee then pushed the Confederate army northward into Pa. and Hooker followed, but owing to differences between him and the authorities at Washington he was relieved of the command at his own request, June 28, his successor being Gen. Meade. In the autumn of that year the 11th and 12th corps were detached from the Army of the Potomac and under Hooker were transferred by rail to reinforce the army of Rosecrans, which had been defeated at Chickamauga and was under siege in Chattanooga. In Nov. Hooker fought the "battle above the clouds," driving the Confederates from the peak of Lookout Mt. Hooker's two corps were consolidated into the 20th and served conspicuously in the Atlanta campaign. In July, 1864, owing to incompatibility between Sherman and Hooker, the latter relinquished his command and went north. He was not again prominent during the war.
- Hooker, Richard.**—Born about 1553; died, 1600. A celebrated English divine and theological writer.
- Hooper, William.**—(1742-1790.) He was one of the signers of the Declaration of Independence.

Hoosac Tunnel.— See TUNNELS.

Hoosick Falls.— A town of New York noted for its manufactures, especially of mowing machines. Pop. (1900), 5,671.

Hope, Alexander James Beresford; later BERESFORD-HOPE.— (1820-1887.) A noted English Conservative politician and writer.

Hope, Anthony.— See HAWKINS, ANTHONY HOPE.

Hopkins, Edward.— Born in England, 1600; died in London, 1657. He was governor of Conn. in alternate years from 1640 to 1654.

Hopkins, Mark.— (1802-1887.) He was president of Williams College (1836-72), and also of the American Board of Commissioners for Foreign Missions from 1857 until his death.

Hopkins, Stephen.— (1707-1785.) Governor of R. I. (1755-68) and one of the signers of the Declaration of Independence.

Hopkinson, Joseph.— (1770-1842.) Noted as a jurist, but more particularly as the author of "Hail! Columbia."

Hops (*Humulus lupulus*).— A perennial plant of the order Cannabinaceæ, the only plant of its genus. It has long twining stems, 3-5-lobed, rough leaves. The flowers are diœcious—male and female. The ripened cones of the female flowers are the parts used in brewing. In 1900 the hop crop of the U. S. was estimated at 208,000 bales of 180 lb each.

Horace, Quintus Horatius Flaccus.— A great and popular Latin lyricist and satirist, who lived between the years 65 and 8 B. C. He was the son of a freedman of Venusia and was well educated, having studied literature and philosophy at Athens, after which he served in the army of Brutus, though he abandoned his military career in 42 B. C. at Philippi. The production of his "Epodes" procured him the patronage and friendship of Mæcenas, the Roman statesman and patron of letters. He was also patronized by Augustus and lived in comfort, if not in luxury, on his estate near Rome—the "Sabine farm," which he has immortalized in his verse. Besides the "Epodes," he wrote Odes, Satires, and Epistles, which have all the elegance and grace of a scholar and man of culture, with a delightful fragrance of the old rural life of Italy.

Hornbeam, The.—2829.

Hornblende.— See ROCKS AND MINERALS.

Hornbook.— Before the art of printing was known, the elements of reading were learned from a leaf containing the alphabet, a number of syllables, the numerals, etc.,—this leaf was fastened to a wooden frame and covered, for protection, by a transparent sheet of horn.

Horned Toad, The.— See LIZARD, 2645.

Hornellsville.— A city in N. Y., on the Canisteo River, noted for its car manufactures. Pop. (1900), 11,918.

Hornet, The.—2770.

"Hornet," The.— An American sloop of war carrying 18 guns, commanded by Capt. Lawrence during the War of 1812. Feb. 24, 1813, near the mouth of the Demerara River, Guiana, she attacked the British brig "Peacock," 18 guns. The "Pea-

cock" was soon in a sinking condition and struck her colors. March 23, 1815, off the Cape of Good Hope, the "Hornet" sank the British brig "Penguin," also of 18 guns. Shortly after this battle, the "Hornet" was chased by the British frigate "Cornwallis," 74 guns, and only escaped capture by throwing overboard her guns and heavy stores.

Horse, The.—2409.

Horse-Chestnut, The.— See CHESTNUT, 2855.

Horse Fair, The.— A noted painting by Rosa Bonheur.

Horse Mackerel, The.— See TUNNY, 2682.

Horse-Power is a rate of doing work equal to 550 foot-pounds per second, or 33,000 foot-pounds per minute. The foot-pound is the unit of work, and it represents the amount of work, or energy, required to raise one pound vertically through a distance of one foot. The same amount of work, namely, three foot-pounds, is done by raising one pound through a vertical distance of three feet, or three pounds through a vertical distance of one foot. The difference between steam horse-power and electric horse-power is in the difference in the nature of the power. To explain this will require the use of an electrical dictionary, containing tables of compilation: the unit of electric horse-power is "the watt." The energy or work is the "volt," "coulomb," or "joule," and measured in foot-pounds is equal to 737,324 foot-pounds. The volt, coulomb or joule is, therefore, the unit of electric work just as the foot-pound is the unit of mechanical work. One electric horse-power is a rate of doing work equal to 746 watts or 746 coulombs per second. The ampère is the practical unit of electric current; the ohm is the unit of electrical resistance—such a resistance as would limit the flow of electricity under an electro-motive force of one volt to a current of one ampère, or to one coulomb per second. "K. W." is the contraction for Kilo-Watt, meaning one thousand watts.

Horse Shoe Bend (Ala.), **Battle of.**— At this battle the spirit of the Creek and Cherokee Indians was completely broken. When Gen. Jackson was informed of the arrival of Creeks in considerable numbers in Tallapoosa Co., he resolved to strike a decisive blow. He sent his stores down the Coosa River from Fort Strother in flatboats, and marched his army against the Indians. Mar. 27, 1814, with 2,000 effective men, he halted at the Horse Shoe Bend of the Tallapoosa River, where 1,200 Indians (one-fourth of whom were women and children) had intrenched. The whites and their Indian allies surrounded the camps. The enemy was attacked in front with bayonet and ball and the torch was applied to their camp in the rear. The Indians fought desperately, the battle lasting all day. In the evening 557 Creek warriors were dead in the little peninsula and some 200 more were killed while trying to escape. The loss of the whites was 22 killed and 99 wounded. The Cherokees lost 18 killed and 36 wounded. Some 300 women and children were taken prisoners.

- Hortense** (EUGÉNIE HORTENSE DE BEAUHARNAIS).—Daughter of the Empress Josephine, wife of Louis Bonaparte, mother of Napoleon III.
- Horus**.—A solar god of Egyptian mythology, 1584.
- Hosmer, Miss Harriet**.—American sculptor, 3604.
- Hotel, How to Manage Successfully**.—5358.
- Hôtel de Cluny**.—In Paris; the palace of the abbots of Cluny in Burgundy; built in the 15th and 16th centuries, now used as a museum.
- Hotel des Invalides**.—A famous institution of Paris, for the care of disabled soldiers; founded in 1670.
- Hot Springs**.—A town in Ark., noted for its hot springs; a health resort. Pop. (1900), 9,973.
- Hottentot-Bushmen**.—A race of South Africa.
- Hottentots**.—A name given to the natives of the Cape of Good Hope by the first colonists in that region.
- Hottest Spot on Earth, The**.—One of the hottest regions on earth is along the Persian Gulf, where little or no rain falls. At Bahrein the arid shore has no fresh water, yet a comparatively numerous population contrive to live there, thanks to the copious springs which break forth from the bottom of the sea. The fresh water is got by diving. The diver, sitting in his boat, winds a great goat-skin bag around his left arm, the hand grasping its mouth; then takes in his right hand a heavy stone, to which is attached a strong line, and thus equipped he plunges in, and quickly reaches the bottom. Instantly opening the bag over the strong jet of fresh water, he springs up the ascending current, at the same time closing the bag, and is helped aboard. The stone is then hauled up, and the diver, after taking breath, plunges in again. The source of the copious submarine springs is thought to be in the green hills of Osman, some 500 or 600 miles distant.
- Houdin** (*ô-dan'*), **Jean Eugène Robert**.—(1805-1871.) A celebrated French conjurer and mechanician.
- "Household Words"**.—The periodical conducted by Charles Dickens. It appeared first in 1850.
- Housekeeping**.—2269.
- System in Housekeeping, 2271.
 - The Housekeeper as a Financier, 2272.
 - The Housekeeper as a Sanitarian, 2274.
 - The Housekeeper as a Nurse, 2275.
 - House Cleaning, 2276.
 - Marketing, 2280.
 - Selecting Meats, 2281.
 - Table Service, 2284.
 - Care of Silver, 2287.
 - Carving, 2287.
 - Flour, 2290.
 - Bread Making, 2293.
 - The Care of Food, 2293.
 - Utilizing Remnants, 2294.
 - The Care of Linen, 2295.
 - Care of Lamps, 2296.
 - Sweeping, 2297.
 - Household Pests, 2299.
 - The Servant Question, 2302.
- "House of the Seven Gables, The"**.—A novel by Hawthorne, published in 1851.
- Houssaye** (*ô-sâ'*), **Arsène**.—(1815-1896.) A noted French critic and novelist.
- Houssaye, Henri**.—Born 1848; a French historian, son of Arsène Houssaye.
- Houston**.—A city in Tex., an important railway and commercial center. It was settled in 1836, and for a period was the capital of the state. Pop. (1900), 44,633.
- Houston, Sam**.—(1793-1863.) A noted American statesman and general. He served in the War of 1812; member of Congress from Tenn. 1823-27; governor of Tenn. 1827-29; commander-in-chief of the Texans defeated at San Jacinto by the Mexicans, 1836; president of Texas 1836-38 and 1841-44; U. S. senator from Texas 1845-59; governor Texas 1859-61.
- Houyhnhms** (*hou'inmz*).—In Swift's "Gulliver's Travels," a community of horses endowed with human intelligence.
- Hovenden, Thomas** (1840-1895).—A distinguished American painter.
- Hovey, Alvin P.**—A U. S. army officer in the Civil War. He entered the service as colonel of the 24th Ind. volunteers and reached the grade of maj.-gen.; commanded, in 1864, in the 23d corps of Sherman's army, a division known as "Hovey's Babies" because of the large number of boy soldiers in its ranks. B. 1821; D. 1891.
- Hovey's Babies**.—A name applied by the soldiers of Sherman's army, in 1864, to a division of the 23d corps, commanded by Gen. Hovey; so called because it was largely composed of young recruits, between the ages of 15 and 19, who nevertheless made excellent soldiers.
- Howard, Catherine**.—Fifth wife of Henry VIII. Executed, on a charge of adultery, 1542.
- Howard, Thomas**.—(1473-1554.) Earl of Surrey and third Duke of Norfolk. A noted English soldier and politician; uncle of Catherine Howard, fifth wife of Henry VIII.
- Howard Association**.—An association of volunteer nurses during the yellow fever epidemics in the Southern States, 1868-79.
- Howard University**.—An institution of learning, founded at Washington, D. C., in 1867. It was especially designed for the higher education of the colored race, but is open to all races and creeds.
- Howe, Elias**.—Inventor; sketch of, 302.
- Howe, Julia Ward**.—Author and social reformer; sketch of, 307.
- Howe, William** (Viscount HOWE).—(1729-1814.) A British general; successor of Gen. Gage as commander-in-chief in America.
- Howells, William Dean**.—An American novelist and poet of the realistic school, born in Ohio in 1837, and at one time editor of "The Atlantic Monthly," in charge of the Editor's Study in "Harper's Monthly," and editor also for a while of "The Cosmopolitan Magazine." He is perhaps the best known of contemporary American men of letters, as he has been one of the most industrious. He has traveled considerably in Europe, and in the years 1861-65 was U. S. consul at Venice, to which fact we owe his "Italian Journeys" and "Venetian Life." Among the early products of his pen to bring him into notice were "Their Wedding Journey,"

and "A Chance Acquaintance," which showed his delightful craftsmanship in letters and his art instinct. These were followed by "A Foregone Conclusion," "The Lady of the Aroostook," "The Undiscovered Country," "A Fearful Responsibility," "A Modern Instance," "A Woman's Reason," "Dr. Breen's Practice," and "The Rise of Silas Lapham"—the latter a typical American novel, told with much skill, and bright with humor and kindly human sympathy. To these works he has added many others, perhaps the best of which are "A Hazard of New Fortunes," "The Quality of Mercy," and "The Day of Their Wedding." He has also published a "Life of Lincoln," "My Literary Passions," "Modern Italian Poets," "Poems of Two Friends" (in conjunction with John J. Piatt), together with several farces, and a series of collected essays of much charm, entitled "Impressions and Experiences."

How to Tell a Story.—1206.

Hoyle, Edmund.—(1672-1769.) An English writer on games.

Huamantla (Mexico), Battle of.—Gen. Lane set out from Vera Cruz about Oct. 1, 1847, with 2,000 Americans to reinforce the garrisons between there and the City of Mexico. Santa Anna, learning of Lane's approach to Puebla, set out to intercept him with 4,000 Mexicans and six pieces of artillery. On the night of Oct. 8, 1847, the Mexicans were encamped in the city of Huamantla, and Capt. Walker was sent forward with a company of cavalry to give them battle. Walker's cavalry fought desperately in the face of superior numbers, until the arrival of the infantry when the Mexicans were put to flight, with a loss of 150 men. Capt. Walker was killed in the fight.

Hubbardton.—A town in western Vt., scene of a defeat of the Americans under Francis and Warner, by the British commanded by Frazer, in 1777. See following article.

Hubbardton (Vt.), Battle of.—Upon Burgoyne's advance toward Albany, July 6, 1777, Gen. St. Clair, whom Schuyler had left in command at Ticonderoga, being hard pressed by the enemy under the Hessian general, Riedesel, began to retreat toward Rutland. The left wing of the British army under Gen. Frazer, pursued the Americans, and in the afternoon of the 7th, came upon Cols. Warner, Francis, and Hale, with about 900 men, at Hubbardton, Vt. The British force was officially reported at 858. The Americans stood their ground bravely, but on the arrival of Riedesel, they were forced to retire. The American casualties were about 360; those of the British, 183.

Hübner, Rudolf Julius Benno.—(1806-1882.) A German historical painter.

"**Hudibras.**"—A poetical satire written by Samuel Butler, chiefly against the Puritans. It appeared 1663-78.

Hudson, Henry.—Died in Hudson Bay (?), 1611. A famed English navigator. After commanding several exploring expeditions in the Arctic regions in 1609, he explored the river which now

bears his name, and ascended nearly to the site of Albany. The year following, he sailed in the "Discovery" to find a northwest passage and entered Hudson Strait and Hudson Bay. He passed the winter in James Bay, but on his return a mutiny occurred among his men who took him, along with eight others, and set them adrift in a small boat on Hudson Bay. They were never seen again. In his early years Hudson was in the service of the Dutch East India Company.

Hudson Bay.—A large inland sea in the Dominion of Canada. It was explored by Henry Hudson in 1610. The land around it was known until 1869 as Hudson Bay Territory, and was owned and operated by the Hudson Bay Company under a charter granted in 1670 by King Charles II. In 1869, the company was bought out by the British and transferred to the Canadian Government. The territory now forms a part of the Dominion. The price of the transfer was one and a half million dollars.

Hudson Bay Company.—A trading corporation chartered by Charles II., in 1670. The charter was granted to Prince Rupert and other noblemen to discover a new passage to the South Sea, and to trade in the products of British North America. The original charter secured to Prince Rupert and his associates the absolute proprietorship, subordinate sovereignty, and exclusive traffic of an undefined territory which, under the name of Rupert's Land, comprised all the region discovered or to be discovered within the entrance of Hudson Strait. The company afterward (in 1821) combined with the Northwest Fur Company, and became a formidable rival of the U. S. in claiming the northwest part of America. War nearly resulted from their effort to hold Oregon by force, but the boundary was finally settled in 1846.

Hudson River.—A river in N. Y., rising in the Adirondacks and flowing into New York Bay. It is noted for its picturesque scenery. Length, about 350 miles.

Huger, Frances Kinloch.—(1773-1855.) An American officer noted for his unsuccessful attempt to liberate La Fayette from the fortress of Olmütz. He was discovered and was imprisoned for nearly eight months by the Austrian Government.

Huger, Isaac.—(1742-1797.) As an American general he took an active part in the Revolutionary War. In 1779, he commanded the left wing at the battle of Stono. He also commanded the Virginians at Guilford Court House, but was defeated by Tarleton and Webster at Monk's Corner.

Hugh Capet (*hū ka'pet*).—King of France (987-996).

Hughes, John.—(1797-1864.) A Roman Catholic prelate. He was appointed bishop of New York in 1842 and archbishop in 1850. He was the founder of St. John's College, Fordham, N. Y., in 1839.

Hughes, Thomas.—(1823-1896.) An English author, reformer, and politician. He was the founder of the "Rugby Colony" in Tennessee. He wrote the "Tom Brown" series of books.

Hugo, Victor.—The greatest of French poets, a distinguished novel-writer, and leader of the modern romantic school in France, was born in 1802 and died in 1885. Early in his career he competed in verse for the prizes of the French Academy, and his success probably influenced him to pursue the career of a man of letters, in which he was to win renown, as well as the honor of being made a peer of France. Early in the thirties, he entered the field of the historical novel, with the publication of the picturesque mediæval romance "Notre Dame de Paris." This was shortly afterward followed by a sheaf of lyrical verse, which contains much of his best poetry, "Les feuilles d'Automne" ("Autumn Leaves"), and one of his finest plays, "Marion Delorme." After these came "Le Roi s'Amuse" ("The King Amuses Himself"), which fell under the ban of the public censor, owing to its anti-monarchical sentiments; the dramas "Lucretia Borgia" and "Marie Tudor"; "Ruy Blas" and "Hernani," written for the stage; and a collection of admirable verse, "Les chants du Crépuscule," "Odes and Ballads," and "Odes and Diverse Poems." He now entered the political field and his muse was in a measure silent, and after the *coup d'état* of 1851, when he satirized Napoleon III., whom he at first hailed, he was banished for a while. In the sixties he published his great story "Les Misérables," a romance of modern life, translated into many languages; "The Toilers of the Sea," "L'Homme qui Rit" ("The Man who Laughs"), and, in 1872, "L'Année Terrible," a record of Paris during the siege. This was followed by "Quatrevingt-treize," "L'Histoire d'un Crime," and a volume of charming domestic lyrics, entitled "L'art d'être Grand-père" ("The Art of Being a Grandfather").

Huguenots.—A name given in 1560 to the Protestants in France. (See HENRY IV., of France.)

Hull, Isaac.—(1773?-1843.) An American commodore famed for his defeat and capture of the "Guerrière" when in command of the "Constitution."

Hull, William.—(1753-1825.) He served as general through the Revolutionary War, became governor of Mich. Territory (1805-14), and surrendered Detroit to the British in the War of 1812.

Humber.—The estuary formed by the junction of the Ouse and Trent rivers, between Lincolnshire and Yorkshire, England.

Humbert I.—(1844-1900.) King of Italy (1878-1900).

Humboldt, Baron Alexander von.—An eminent German naturalist and man of science (b. 1769, d. 1859). Though residing for the most part of his life in Berlin, he traveled widely in his day, pursuing his researches in both North and South America, as well as in Central Asia. In 1829 he was a member of an expedition sent out by the then emperor of Russia to northern Asia and to the region of the Ural and Altai mountains and the Caspian Sea. He also visited Cuba and many parts of Spanish America. His published writings, which deal with the countries he

visited and made researches in, embrace an "Examination of the Geography of the New Continent," an account of his Asiatic journey, of his visit to Cuba and New Spain, "Voyages to the Equinoctial Regions of the New (American) Continent," and a great treatise, entitled "The Cosmos," summing up his treasures of scientific knowledge in the fields of mineralogy, terrestrial magnetism, sidereal science, and on the distribution of animal and plant life. His brother, Karl Wilhelm von Humboldt, was a distinguished scholar and statesman (b. 1767, d. 1835). In 1810 he founded the University of Berlin and was for a time German ambassador at Vienna. His later years were devoted to the study of comparative philology, for which science "he ransacked the dialects of three continents."

Humboldt Lake, or Humboldt Sink.—A body of water in western Nev., with no outlet to the sea.

Humboldt River.—It rises in Nev. and flows into Humboldt Lake. The valley through which it runs is traversed by the Central Pacific Railroad. Its length is about 350 miles.

Hume, David.—(1711-1776.) A celebrated Scottish historian and philosopher, best known by his "History of England" (1754-61).

Hummel, Johann Nepomuk.—(1778-1837.) A noted German composer for the pianoforte.

Humming-bird, The.—2588.

Hundred Years' War.—(1338-1453.) Wars between France and England. Though there was not constant warfare for 100 years, yet there was no lasting peace. The English were at first victorious in such battles as Crécy, Poitiers, Agincourt, etc., but they were finally expelled from France.

Hungarian Constitution, The.—Hungary is a constitutional state, with power to grant full and complete political freedom to her people. The king, who is also emperor of Austria, possesses the ordinary powers of a constitutional sovereign, but with this exception, that the powers are carefully guarded. No royal Act is valid unless countersigned by a responsible minister. The king appoints, through his ministers, the officials of the state, but only citizens can be appointed. He summons and dissolves Parliament, and appoints bishops for the Roman Catholic Church. The legislature consists of two Houses: (1) The Table of Magnates—or the House of Lords. The Table was reformed in 1886 and is now made up of hereditary peers, who pay a land tax of 3,000 florins; the great officers of the Church—Catholic and Protestant—and life peers appointed by the Crown. (2) The Table of Deputies, or the House of Representatives. This consists of 453 members. Forty are elected by the Diet of Croatia—these, however, take part only in matters pertaining to their own country, and the others by the people on a limited franchise.

Hungarian Insurrection.—(1848-1849.) A rising in Hungary against the tyranny of Austria. In April, 1849, the Hungarians declared themselves an independent republic, with Kossuth as gov-

- ernor. Russia assisted Austria to subdue Hungary and Kossuth escaped. Constitutional liberties were restored by Austria in 1867.
- Hungarian Race Problem, The.**—The same racial difficulty confronts Hungary as Austria. The population of Hungary is, roughly speaking, 19,069,000, divided into 8,426,000 Magyars, 2,100,000 Germans, 3,000,000 Rumanians, and about 5,200,000 Croats, Serbs, and other Slavs. Though the problem is not so acute in Hungary as in Austria, yet it is one which commands the serious attention of the people. The Magyars are employing in Hungary exactly the same policy of domination as the Germans in Austria, but with a little more success. The German element, though strong, is too scattered to offer much resistance, and in some cases rather than come under Magyar rule the Germans leave the country. The two most difficult obstacles to Hungarian sway are the Rumanians and the Croats, and of the two the Croats are more persistent in their opposition. Outwardly, at all events, the Rumanians yield, but the Croats, on the other hand, have already obtained a larger measure of self-government than any other people under Magyar rule. Hungary may ultimately triumph, but recognizing the proximity of the Balkan States, the uncertainty of their destiny, and the complexity of the whole problem, it will take years of patient toil before the Magyar element subdues the tenacity with which the different races cling to their respective languages.
- Hungerford, Mrs. (MARGARET HAMILTON ARGLES).**—An Irish novelist who wrote under the pseudonym of "the Duchess." She died in 1897.
- Hunkers.**—A name applied to a faction of the Democratic party of N. Y., and later to the conservative element of that party in other states. The name came into use in 1844. The Hunkers in N. Y. opposed the Locofocos, the Barnburners, and the Radicals.
- Huns, The.**—A race of Nomads, of probably Mongolian origin, whom we first hear of about the 3d or 2d century B.C. inhabiting Central Asia, and threatening the Chinese frontier from the steppes of Tartary. From here they moved westward to the region between the Caspian and the Dnieper, where they all but destroyed the Alani. Continuing their westward course, they reached the Danube, where, in the 4th century A.D., they drove the Visigoths, or Western Goths, into Roman territory. With the aid of the Goths, they next attacked Rome, and at Adrianople, in 378, defeated the imperial armies and slew the Emperor Valens. In the 5th century, under Attila, their famous king, who called himself "the scourge of God," they laid waste the provinces of the Eastern Empire and levied heavy tribute upon Theodosius II., after which, in 451 A.D., they invaded Gaul, but were defeated near Châlons-sur-Marne, France, by Aëtius and his composite army of Romans, Franks, and Visigoths. In spite of this setback, Attila and his Huns now invaded Italy, but they never recovered from the loss they sustained at Chalons, and were again beaten at Pannonia, in Hungary, having been dissuaded by Pope Leo I. from falling upon and sacking Rome. After this the Huns fell asunder, Attila having died in A.D. 453. See Gibbon's "Roman Empire."
- Hunt, Holman.**—Distinguished English painter, 3478, 3480.
- Hunt, James Henry Leigh.**—(1784-1859.) An English poet, essayist, and writer.
- Hunt, Richard Morris.**—(1828-1895.) A noted American architect.
- Hunt, Walter.**—A New York mechanic who first conceived the true idea of the sewing machine. (See HOWE, ELIAS, 302.)
- Hunt, William Morris.**—(1824-1879.) An American painter, a pupil of Millet and Couture.
- Hunter, David.**—Born in Washington, D. C., 1802; died there 1886. An officer of the U. S. army. He was commissioned a brig.-gen. in 1861 and a maj.-gen. the same year; commanded McDowell's main column in the advance on Manassas and in the battle of Bull Run (July, 1861) and early in 1862 was ordered to the command of the Dept. of the South, including the states of S. C., Ga., and Fla. He held advanced views, like Fremont in Mo., and issued a proclamation declaring free the slaves in his Dept. This was at once annulled by President Lincoln, and a curb was placed on Hunter. He held various commands during the war. He was a member of the military commission that tried the Lincoln conspirators.
- Hunter, Robert Mercer Taliaferro.**—Born, 1809; died, 1887; noted as a statesman. He became a Democratic member of Congress from Va. in 1837 and 1845, U. S. senator in 1847, Confederate secretary of state in 1861, Confederate senator and peace commissioner in 1865. He was appointed treasurer of Va. in 1877, and retired from public life in 1880. He took a leading part in framing the tariff act of 1857.
- Huntington, Daniel.**—Born at New York, 1816. An eminent portrait painter, and president for many years of the National Academy. Among his chief productions is "The Republican Court in the Time of Washington."
- Huntington, Frederick Dan.**—Born at Hadley, Mass., 1819. An eminent bishop of the Protestant Episcopal church of America. He held the Plummer professorship of Christian Morals in Harvard College (1855-60). He subsequently withdrew from the Unitarian denomination and became an ordained minister in the Protestant Episcopal church. He was one of the founders of the "Church Monthly," and was appointed bishop of N. Y. in 1869.
- Huntington, Samuel.**—(1732-1796.) He was one of the signers of the Declaration of Independence, and governor of Conn. (1786-1796).
- Huntsman's Cup, The.**—2898.
- Huntsville.**—A city in Ala., noted for its manufactures. Pop. (1900), 8,068.
- Hunyady, Janós.**—(1387-1456.) A Hungarian general who defended Belgrade against the Turks, 1456.

- Hurlbut, Stephen Augustus.**—Born at Charleston, S. C., 1815; died at Lima, Peru, 1882. A U. S. army officer in the Civil War and a diplomat. While young he removed to Ill.; was commissioned a brig.-gen. early in 1861 and maj.-gen. in 1862; commanded a division at Shiloh, in which battle he was conspicuous for gallantry and capacity; took part in Sherman's Meridian, Miss., campaign in 1863 and in other operations till the close of the war; was U. S. minister to Colombia (1869-73), member of Congress from Ill. (1873-77), and in 1881 was appointed minister to Peru, where in the following year he was stricken with a fatal illness.
- Huron, Lake.**—One of the great lakes of the St. Lawrence system, between the U. S. and Canada. It has an area of 23,800 sq. miles; is 574 feet above sea-level, and has an average depth of 1,000 feet. It is connected with Lake Superior by St. Mary's River, and with Lake Michigan by Mackinaw Strait. Its waters empty into Lake Erie through River St. Clair, Lake St. Clair, and the Detroit River.
- Hurst, John Fletcher.**—Born near Salem, Md., 1834. A bishop of the Methodist Episcopal church, distinguished as a church historian. He became professor of historical theology in Drew Theological Seminary at Madison, N. J., in 1871, and was made bishop in 1873. He wrote "History of Rationalism," "Outline of Church History," "Short History of the Reformation," "The Success of the Gospel," etc.
- Huss, John.**—(1369-1415.) A Bohemian religious reformer who was burned at the stake as a heretic by order of the Council of Constance.
- Hutchinson, Mrs. (ANNE MARBURY).**—Born in England about 1590; killed by Indians near Hell Gate, N. Y., 1643. A noted religious enthusiast. She was an antinomian who emigrated to Mass. in 1634 whence she was banished (1637).
- Huxley, Thomas Henry.**—A distinguished English biologist, professor of physiology and natural history, and a writer of high intellectual caliber, was born in 1825, and died in 1895. He was a man of great and varied attainments, as well as of wide reading and research, and in early life a considerable traveler. Soon after graduating he studied medicine and obtained the position of assistant-surgeon on one of the ships of the British navy, on which he made a lengthened cruise in South Pacific waters. On his return to England, he filled several positions and professorships and was for many years connected with the Geological Survey of England. After the publication of Darwin's "Origin of Species," he became an ardent defender of the doctrine of organic evolution, and somewhat of a materialist. He was one of the ablest of modern zoölogists, and a writer not only of rare ability, but of incomparable force and pure English style. His writings embrace a work on "Crayfish," on "The Anatomy of Vertebrate and Invertebrate Animals," a work on "Physiography," "Lessons in Physiology," on "Ocean Hydrozoa," "Lay Sermons," "American Ad-
- resses," on "The Physical Basis of Life," on "Man's Place in Nature," "Science and Culture," on "The Classification of Animals," and an introductory work on "Zoölogy."
- Huygens (hî-genz), Christian.**—(1629-1695.) A famous Dutch astronomer, physicist, and mathematician. He discovered the ring of Saturn, improved the telescope, invented the pendulum clock, and developed the wave-theory of light.
- Hyacinth, The.**—2916.
- Hyades (hî-a-dēz).**—A group of nymphs and sisters of the Pleiades.
- Hyde Park.**—A park in Westminster, London. It has an area of 390 acres. It is the principal recreation ground of London.
- Hyderabad.**—The most important Mohammedan and native state in India, situated between Bombay and Madras. Hyderabad or Haidarâbâd is the capital, situated on the Musi River. The pop. of the state is nearly 12 millions; and of the city, (1901), 446,291. The state sided with England in the Indian Mutiny of 1857.
- Hyder Ali.**—An East Indian potentate and enemy of Britain, who, though of obscure origin, rose from being a soldier in the army of Mysore to be a maharajah. He and another Mussulman potentate, the nizâm of the Deccan, in 1767, incensed at the Madras Government, took up arms against the English and with Hyder Ali's cavalry ravaged the country to the walls of Madras. The Mysore army was not only well disciplined but excellently handled, and for a time the fate of Southern India was in doubt. At this juncture, Warren Hastings, afterward governor-general of India, but who was at the period member of the Madras Council, with the help of Sir Eyre Coote, saved the country for the British, Coote having in 1781 thrice defeated Hyder Ali, who in the previous year had invaded the Carnatic in alliance with the French and the Mahrattas. Hyder Ali died in 1782, though his son, Tippoo Sahib, lived to direct two later wars against the English, dying in the breach at Seringapatam when that fortress was stormed under General Harris. The assault on Seringapatam is famous in East Indian history; it was led by General Baird, and Col. Sir Arthur Wellesley, afterward Duke of Wellington, participated in it.
- Hydra, The.**—See RADIATES, 2712.
- Hydra.**—A 9-headed dragon of Greek mythology so terrible that, when one head was cut off, two new ones grew instantly. (See HERCULES, 1624.)
- Hyena, The.**—2464.
- Hygeia.**—The Greek goddess of health, the daughter of Æsculapins.
- Hyksos, or Shepherd Kings.**—A foreign race of kings who ruled over Egypt for 511 years, beginning about 2000 B.C.
- Hymen.**—The god of marriage among the Greeks.
- Hypatia.**—A celebrated female philosopher who taught at Alexandria in the 4th and 5th centuries. She is the heroine of Charles Kingsley's novel "Hypatia," published in 1853.

Hyperboreans.—A people who, according to Greek legend, lived beyond the north wind, and were free from the cold blasts and enjoyed sunshine and fruitfulness. They lived for a thousand years. The name came to be applied to inhabitants of northern regions generally.

Hyperion.—One of the Titans, son of Uranus and Gæa.

Hypothecate.—To pledge as security.

Hypolyte (*ê-pô-lêt*).—Louis Mondestin Florvil (1827–1896). A general and politician of Haïti, who was president of the republic for seven years.

I

Iago.—A character in Shakespeare's "Othello."

Iapetus (*î-âp'ê-tus*).—In Greek mythology, a Titan, son Uranus and Gæa.

Iberia.—In ancient geography: (1) The peninsula now comprising Spain and Portugal. (2) The region bounded by the Caucasus Mountains on the north, Armenia on the south, Albania on the east, and Colchis on the west.

Ibex.—Ancient name of the steinbok of the Alps. Now according to many eminent zoologists a genus of the goat family. The horns are flat, marked with transverse knots in front, whereas those of the true goat are compressed, keeled in front and rounded behind.

Ibises, The.—2617.

Ibo.—Portuguese East Africa. An island seaport and town.

Ibrahim.—See ABRAHAM.

Ibsen, Henrik.—Born, 1828. A noted Norwegian novelist and dramatic poet.

Icarian Sea.—That part of the Ægean Sea which surrounds Samos and the islands of Icaria.

Icarus.—In Greek legend, the son of Dædalus. When, with his father, he took flight from Crete, he soared too near to the sun, and his wings of wax were melted so that he fell into the sea and was drowned.

ICE-CUTTING AND ARTIFICIAL ICE-MAKING.—

Every important ice-harvesting company has permanent houses situated on the banks of the bodies of water from which the ice is to be cut. In former years ice-cutting was done entirely by human labor, but to-day it is accomplished by machinery.

If the water of the lake or river from which the ice is to be taken has frozen by midwinter to a thickness of eight or ten inches, the work of the cutting will soon begin. For the overseeing of the work only the most experienced ice men are engaged, as the success of the harvesting depends largely on their judgment as to the best time for the cutting. Frequently, a layer of snow congeals on the surface of the ice, and the product becomes what is known as snow-ice. If there is a deep covering of slush on the ice, men, with horses and scrapers, are employed to remove it. After this is accomplished the "marking-off" takes place. This begins where the ice is thickest and best. Simultaneously, the cutting of a channel to the entrance of the ice-houses, is under way. The marking-machine is operated much as is a

mowing-machine; the operator, from the seat of the machine, guides his horses with one hand, and with the other manages the adjustable saw that makes in the ice a sharp indentation several inches deep. Following the machine come several groovers who sink heavy steel bars, with pointed ends, through the ice almost to the water beneath. Then there comes the "barring-off," which divides the sheet of ice into pieces about twenty yards in length and ten yards in width. Men, with long hooks, guide these great ice blocks into the channel, where they are termed floats; another gang of men pulls the floats along the channel to the ice-house entrance. Powerful engines in the ice-house are causing the revolution of a great endless chain. As a float appears in the slip, men divide it into blocks about three feet square, each of which fitting into one of the links of the chain is moved up the incline. In this process, the blocks are delayed for a scarcely perceptible moment by a machine, with a set of steel teeth, which hangs stationary above the chain and which tears off the superfluous rough ice or any snow which may still be adhering to the ice blocks. This scraper takes the place of numerous men, who would otherwise have to shave off the rough ice, after this snow scraping. This scraper above the chain is reset for ice of various thickness and quality.

The ice-house is divided into several compartments, which are also called houses. The walls are interlined with hay and tan, and the blocks of ice are packed in tiers until the houses are three-fourths full.

ARTIFICIAL ICE-MAKING

The consideration of the subject of artificial ice-making may be, for convenience, subdivided under two headings—methods of generation, and methods of application. The systems of generation that are commercially successful are those of absorption and compression. In the first, the principle involved is the absorption of ammonia, or anhydrous ammonia, by water. The material supplied to the circulating system of the apparatus is aqua ammonia.

The complete cycle of operations involves four processes, which are, in order of succession, the generation of gas, the condensation of gas, the expansion of gas, and the absorption of gas. These four processes are constantly repeated, so that the complete process

Ice-Cutting and Artificial Ice-Making.—*Continued*

becomes continuous. At the start, ammonia is pumped from the iron drums in which it is delivered into the generator. The generation involves, through the application of heat to the generator, the driving off of ammonia gas, bringing up the pressure from 120 to 160 pounds to the square inch. The ammonia driven off is in a gaseous state. At this pressure, by cooling, it may be reduced to a liquid. This is done in the condensation process. For this purpose, a condenser is used in which the ammonia is conducted through pipes, which are brought in contact with cold water, either by having the water trickle over them or by being immersed in a tank filled with water. Circulation of water is necessary for continuous operation. The ammonia gas gives up heat to the water and is, in consequence, condensed to a liquid. In the next, the expansion process, the refrigeration is produced. The ammonia gas is allowed to pass through a valve which is regulated into a net-work of pipes in the refrigeration chamber. A low pressure is maintained in the expansion pipes. The liquid ammonia, at a high pressure, in entering this system with low pressure, changes from a liquid to a gas. This gas is reduced in temperature by an amount depending upon the initial temperature, the pressure of the liquid ammonia, and the pressure in the refrigerating coils. The cool gas will, accordingly, absorb heat from the pipes and thus produce refrigeration. The low pressure in the refrigerating coils is maintained by the absorber, which contains what is called weak liquid, or water from the generator which has been deprived of the greater part of the ammonia gas. This liquid is accordingly in a condition to absorb ammonia gas again. The absorption process consists in the absorption of the ammonia gas generated in the refrigerating coils by the weak liquid in the absorber. When this liquid in the absorber is charged to the desired degree with ammonia gas, it is pumped to the generator, and is ready to pass through the same series of operations again. The only mechanically operated feature of the absorption system is the pumping.

There is, by the great mechanical operation which constitutes the base of the ammonia compression system, decided contrast to the methods employed by the absorption system. The compression system occupies a preëminent position in the artificial production of ice. The process consists of a complete cycle involving compression, condensation, and expansion. These three steps are made continuous. The first ammonia-compression ice machine used in the United States was erected in 1880. It proved practical, and, with various improvements, is largely used to-day.

The Lindo machine which is also used has a compressor of the double-acting type, and is so constructed that either end of the cylinder can be attached separately or combined to any

part of the plant, whereby each works independently of the other, in reality making two single-acting cylinders. The ammonia gas is drawn through the suction valve situated at the upper part of the cylinder head, and is compressed and forced out through the discharge valves situated at the lowest point of the cylinder. The compressed gas then passes into the condenser, having first passed through the oil-trap where any lubricating oil from the compressor is deposited. Between the compressor and the oil-trap is a check-valve, the duty of which is to prevent loss of gas in case of accident to the compressor. The warm compressed gas enters at the top pipe, and passes downward through the successive pipes of the condenser, and by the pressure produced by the compressor and through the cooling influence of the cold water running over the pipes of the condenser, becomes liquified. The liquid ammonia is then discharged into the liquid receiver, generally situated in the engine room, where it is stored for future use.

From the receiver, the liquid ammonia passes to the cellars, storage rooms, chill-rooms, and ice-making tank. There, it expands to its original gaseous form, and it is this expansion of the liquid ammonia that does the actual work of refrigeration. The expanded gaseous ammonia is then drawn back into the compressor, and sent again on the same round of operation.

In some cases, and for particular purposes, the brine system is used instead of direct expansion. Ammonia, instead of evaporating in the cooling rooms, evaporates in several sets, or nests, of coils placed in a large well-insulated iron or wooden tank, which is filled with a strong solution of salt that can be cooled to the desired temperature. Waters affected by either of the treatments are always distilled and freed from organic matter. It is necessary to run ice-making plants day and night that the drawing off of cakes from cans in the tank may be done with regularity. Machine-made ice supplants the natural product, to a large extent, wherever it is introduced. The cost of cutting, handling, and transporting natural ice, in cities as far north as New York, Philadelphia, and Chicago, permits manufactured ice to be sold there in direct competition, and with gratifying profits. In the Southern States, the manufactured ice is most profitable.

Ice Hockey.—1909.

Iceland.—An island in the North Atlantic Ocean, bordering on the Arctic circle. It belongs to Denmark, and has an area of about 40,000 square miles, with an estimated population of 71,000. Its chief trade is in fish, cod-liver oil, eider-down, and live stock. The occupations of the people are fishing, and the breeding of cattle and sheep, which thrive on the natural pastures. The island is subject to earthquakes, especially in the south, where the volcano of Hecla, 70 miles east of Reykjavik, is ever and anon in the throes of eruption. There is considerable

trade in seals and whales, and also in ptarmigan and eider-druck. The Icelanders are chiefly of Scandinavian stock. Capital, Reykjavik.

Icelandic Fairy Tales.—1354.

Ice Polo.—2088.

Ichneumon.—A Linnæan genus of insects now constituting a family or tribe, Ichneumonidæ, of the order Hymenoptera, section Terebrantia. Many of them are minute, many are large; the species *Rhyssa* being the largest. The abdomen is united to the thorax by a pedicel which is slender. They deposit their eggs in or on—generally in—the bodies, eggs, or larvæ of insects, or on spiders, and are extremely useful to the farmer.

Idaho.—One of the Western States of the United States of America. Bounded on the north by British America, east by Montana and Wyoming, south by Utah and Nevada, west by Oregon and Washington. It was included in the Louisiana Purchase and became part of Oregon Territory, and later of Washington Territory; it was organized as a separate territory in 1863 and was then of great extent, including within its limits the present state of Montana and part of Wyoming. The present boundary was fixed in 1868, and Idaho was admitted as a state in 1890. Much of the surface is mountainous, the principal ranges being the Rocky, Salmon River, and Bitter Root; the leading industries are the mining of gold and silver, and the raising of cattle and sheep, to which the valleys are peculiarly adapted. The capital is Boise City, and other principal towns are Idaho City, Silver City, and Lewiston. Pop. (1900), 161,772.

Idalium, or Idalia.—A town on the coast of Cyprus, sacred to Aphrodite.

Ideas, The Value of.—4288.

Ides (I divide).—In the ancient Roman calendar the 15th day of the months of March, May, July, and October, and the 13th day of the other months.

Idleness.—4538.

“Idler, The.”—By Samuel Johnson, a series of essays first published in 1758-60, in “The Universal Chronicle,” a newspaper of the period.

Idomeneus.—In Greek legend, a king of Crete, a hero in the Trojan War.

Idris, or Enoch.—1428.

“Idylls of the King.”—The title of a series of poems by Tennyson, based upon the Arthurian romances.

Ignis Fatuus (Lat. “vain or foolish fire”).—A light that sometimes appears in summer or autumn nights and flits in the air above the surface of the earth, chiefly over marshy places, stagnant pools, and churchyards. It has puzzled scientists, but is undoubtedly hydrogen gas, possessing the power of spontaneous ignition on coming in contact with dry atmospheric air; such gas being generated by the decomposition of animal matter present in the soil.

Iguana, The.—See LIZARD, 2644.

Ilex.—A genus of trees and shrubs of the natural order *Ilicineæ*, or holly tribe. It is a native of Southern Europe and Northern Africa. Its

wood is very hard and is used extensively for manufacturing purposes.

“Iliad, The.”—1715.

Ilium.—In ancient geography, a place in Asia Minor. Here Troy was founded about 1341 B. C.

Illinois.—One of the Central States of the United States. Bounded on the north by Wisconsin, east by Lake Michigan and Indiana, south by Kentucky, west by Iowa and Missouri. It was settled by the French in 1682; was ceded to Great Britain in 1763, and to the United States in 1783; became part of the Northwest Territory and later of Indiana Territory; was made a separate territory in 1809 and was admitted to the Union in 1818; it was the scene of the Black Hawk War in 1832, and of Mormon troubles in 1844. The surface is generally level, and it is one of the chief states in the production of wheat, corn, and oats; coal and lead are its principal mineral products, and in its cities are large manufactories of various kinds. It is the third state in population; has 102 counties; the capital is Springfield, and the chief city is Chicago, the second city in the United States; other large towns are Peoria, Rock Island, Rockford, Alton, Bloomington, Cairo, Decatur, Elgin, Galena, Jacksonville, Joliet, and Quincy; area 56,650 sq. miles; pop. (1900), 4,821,550; nicknamed the Sucker State, or the Prairie State.

Illinois Indians.—A confederacy of the Algonquin stock, which formerly occupied territory now included in Ill. and parts of Iowa, Mo., and Wis. The principal tribes of the confederacy were the Kaskaskia, Peoria, Cahokia, Tamaroa, and Michegamea. The Illinois were allies of the French, and for this reason the Iroquois, in 1678, waged a long and destructive war against them. In 1769, Pontiac, an Ottawa, who was chief of the confederation, was assassinated by a Kaskaskia Indian, and a war of extermination by the Lake tribes followed. There remain only about 165 Illinois Indians at the Quapaw Agency, Ind.

ILLUMINATING GAS.—

If you hold a cool glass tumbler over a burning gas jet for a moment, you will see a little film of moisture form on the inside of it and remain until the tumbler becomes warm, when it will disappear. Can you tell what causes this film? And does it give you any hint of the composition of the gas that is being burned? Think a moment, and you will remember that water is composed of oxygen and hydrogen, and that when hydrogen is burned in the air, water is formed. It is equally true, that whenever water is formed by burning anything, hydrogen is present in it. So, you see, the gas used for lighting purposes must contain hydrogen.

Let us now see whether we can find out something more about the composition of gas. Take a piece of glass and wet it with a little fresh lime water and hold it over the gas flame. Wait for a few moments and see whether any change takes place in the water. A change does occur; the water turns somewhat milky.

Illuminating Gas.—*Continued*

This, you remember, shows the presence of carbonic acid gas, and the formation of carbonic acid gas, when burning is going on, shows that the element *carbon* is present.

From these two simple experiments, we learn that illuminating gas contains hydrogen and carbon. An examination of any kind of illuminating gas will show that these two substances are always present. Sometimes there are comparatively small quantities of other substances found in the gas, but its value for lighting purposes depends on these two.

Something has already been said about hydrogen, in connection with water; but nothing has been said about carbon, about which you must now learn something, if you want to understand how illuminating gas is made.

Carbon is one of the elements, and a very important one it is, for it enters largely into the composition of every living thing in the world, as well as into some without life. It forms more compounds than any other element, and occurs in more different forms. To obtain tolerably pure carbon, all that is necessary is to heat a piece of wood, in a closed vessel, until it is converted to charcoal. This black substance is made up almost entirely of carbon. Its properties are of considerable interest, but the only one that we now wish to note, is the readiness with which it burns when heated in the air or in oxygen.

Charcoal has much the same composition as hard coal, and both are formed in much the same way. Thousands of years ago many large forests of trees, somewhat different from those we now see, were covered over with soil and rocks, during changes that occurred in the earth's surface, and the heat inside the earth slowly charred the wood, until almost nothing was left but the carbon.

Soft coal was formed in the same way, but the process was not carried so far. Along with the carbon in soft coal, we find a considerable quantity of other substances, of which hydrogen forms the greater part. It is this fact that makes soft coal useful in the manufacture of illuminating gas.

When soft coal is heated in a closed vessel, a gas is driven off that will burn. This may be shown by taking an ordinary clay tobacco pipe, putting a small piece of coal in the bowl, closing the opening with wet clay, and putting the bowl of the pipe in the fire. After it has become quite hot, a gas will be found issuing from the stem of the pipe that will take fire and burn.

This is in a small way just what is done in the manufacture of coal gas. Soft coal is heated in large tubes of fire clay called *retorts*, and the gas that is driven off is purified, and is then conducted through pipes to our houses. The part of the coal that cannot be converted into a gas by heat is left behind in the retort. It consists largely of carbon and is known as *coke*.

While the gas that comes directly from coal will burn, if brought into contact with flame, it

is far from being a desirable gas to burn in our houses. It has in it a number of substances that must be removed to fit it for general use, so that the purification of the gas is quite as important as its extraction from coal.

From the retorts the gas passes into a horizontal pipe containing water, which cools it and causes most of the tar and water vapor that are driven off with it to become liquid and settle in the water. From here the gas goes on through a series of curved pipes, which are kept cool by the air, and in which some more tar settles. This series of pipes is known as the *atmospheric condenser*, and from it the gas passes on into a series of vessels containing coke, over which a fine spray of water is constantly being blown. These are the *scrubbers*, and they serve to remove the last traces of tar and some of the sulphur compounds, that are always present. The removal of the latter is very important, for when sulphur is burned, the gases given off are not only extremely unpleasant to breathe, but they are most injurious to both health and property.

From the scrubbers, the gas passes on to the *purifiers*—vessels containing trays filled with lime and oxide of iron. Here the remainder of the sulphur compounds are absorbed, partly by the lime and partly by the iron, and at the same time the lime absorbs a small quantity of carbonic acid gas, which is formed with the other gases. From the purifiers, the gas passes into great iron tanks, in which it is stored until needed.

The gas, as it is stored in the tanks or gas holders, consists mainly of hydrogen, a number of compounds of hydrogen and carbon, and a small amount of a compound of carbon and oxygen containing less oxygen than carbonic acid gas, and known as *carbon monoxide*. Of these, the hydrogen and carbon monoxide burn with a very pale flame, that give very little light, but much heat. The light-giving quality of the gas is due to the compounds of carbon and hydrogen. When these burn, the particles of carbon are heated white hot and glow very brightly, making the flame luminous.

There are, of course, in the purified gas some traces of the impurities, that were for the most part removed. These are compounds containing sulphur and ammonia. The quantities of these substances left in the gas after the process of purification are so small that they do no harm; but the quantities absorbed in the process of purification are quite large, and considerable use has been made of them. The water used for washing the gas is heavily charged with ammonia and is, in fact, the chief source of the ammonia sold by druggists.

In addition to coal gas made in the way just described, there is another form of illuminating gas, in the manufacture of which coal is indirectly employed. This gas, known as *water gas*, because it is formed by the decomposition of water, is produced by passing steam over red hot carbon, in the form of hard coal or

Illuminating Gas.—*Continued*

coke. When this is done, the hydrogen in the steam is set free and the oxygen combines chemically with the carbon, to form the carbon monoxide, that was mentioned as being present, in small proportions, in ordinary coal gas. This carbon monoxide is poisonous, if much of it is breathed, and as it has no odor it is difficult to detect when escaping. A number of deaths have resulted from water gas for this reason, and in some states the laws forbid its use for lighting purposes.

When water gas is used it must be enriched with some other substances, before it will yield much light. You have already learned that neither hydrogen nor carbon monoxide burns with a bright flame, and you will see that water gas must have something added to it to fit it for lighting purposes. The substance usually added is the vapor of some light, volatile oil, like gasoline. This vapor is composed of compounds of carbon and hydrogen, and when it is mixed with the water gas it forms a gas that yields a very satisfactory light; and that may be produced more cheaply than common coal gas.

There remains one more form of illuminating gas which has been the subject of much discussion in recent years, namely, *acetylene*. This is a compound of carbon and hydrogen, in which there is twelve times as much carbon as hydrogen. It has not been discovered recently, for it was known early in the 19th century, but its possible use for lighting purposes was not considered then.

Attention was directed to it a few years ago by the discovery of a substance called *calcium carbide*. This is a compound of carbon and the metal calcium, formed by heating to a very high temperature a mixture of coal and lime. It has the peculiar property of decomposing, when treated with water. The calcium present combines with the oxygen and half the hydrogen of the water, to form common slacked lime or *calcium hydrate*, while the carbon and the remainder of the hydrogen combine to form acetylene gas.

The gas formed in this way needs no purification before burning; it can be produced in small generators, and the production can be checked at any time. When burned in the proper form of burner it yields the brightest of all gas flames. For these reasons, it is adapted for use in small villages and for lighting single houses. It is also frequently used in magic lanterns, where a strong and steady light is necessary. But the cost of producing acetylene in large quantities is greater than that of coal gas, and it seems extremely unlikely that it will ever be much used for lighting large cities and towns.

Illuminating Gas.—The first illumination by gas in the United States was at Boston in 1822.

Illyria.—An ancient region east of the Adriatic Sea comprising the modern countries of Albania, Bosnia, Serbia, Croatia, and Dalmatia. The

Illyrians were the ancestors of the modern Albanians. It was conquered by the Romans, made a province, and later a prefecture.

Iloilo.—A seaport, with a good harbor, on the island of Panay, one of the Philippine group. It forms the capital of the populous province of Iloilo, and is with Cebu and Manila the chief ports of the Philippines. In Dec., 1898, after the cession of the Philippines by Spain to the United States, the Spaniards surrendered the town to the Filipino insurgents who were then besieging it. In the following February it was, however, captured by United States troops under Gen. Marcus P. Miller. Pop., about 15,000.

Ilstey.—In England, an ancient market town of Berkshire. One of the leading sheep markets of the country.

Imagination.—800.

Imitation of Jesus Christ (*De Imitatione Christi*).—A religious work usually ascribed to Thomas à Kempis.

Immigration.—No official statistics of immigration were kept previous to 1820. By act of Congress, Mar. 2, 1819, collectors of customs were required to keep a record and make returns to the Treasury Dept. of all passengers arriving in their respective districts from foreign ports. As early as 1700, large numbers of Germans immigrated to America, most of them settling in Pa. Some 5,000 arrived in that colony in 1729. Various estimates have been made of the number of immigrants coming to the U. S. prior to 1820. These ranged from an average of 4,000 to 7,800 a year. Dr. Loring, of the U. S. statistical bureau, calculates that 250,000 immigrants came to the U. S. between 1775 and 1820. In 1820, the first year of record, there were 8,385 arrivals. The following years showed a steady increase up to 1854, when the number reached 427,833. The total immigration from Jan. 1, 1820, to the close of 1893 was more than 20,000,000. This large influx of foreigners so disturbed the existing social conditions that remedial legislation was demanded. By an act of Congress passed in 1882, a head tax was laid upon every immigrant by sea, and commissioners were appointed to inspect the vessels entering American ports. They were given the power to prevent the landing of any "convict, lunatic, idiot, or other persons likely to become a public charge." Another law, passed in 1885, made it unlawful to pay the transportation or encourage in any way the immigration of aliens under contracts or agreements to perform labor or service in the U. S. The penalties attached to this act are \$1,000 fine upon the person so encouraging such immigrant and \$500 upon the captain of the vessel who knowingly transports the contract laborers. The immigration laws were amended 1887, 1888, 1891, and 1892. These laws have served to reduce the number as well as to improve the class of immigrants.

Impeachment.—The presentation of charges of maladministration against a civil officer before a competent tribunal. In the U. S. the House of Representatives has the sole power of impeach-

ment of the President, Vice-president, and all civil officers of the government. The Senate has the sole power as a high court to try such impeachments. The chief-justice presides at the trial of a President. A two-thirds vote is necessary to convict. Most states have similar regulations regarding the impeachment of state officials. This mode of trial of public officials comes to us from England, where impeachments are made by the House of Commons and tried by the House of Lords. In the history of our Federal Government there have been only seven cases of impeachment. Senator William Blount, of Tennessee, was impeached by the House in 1797, for treasonable negotiations with Great Britain for the transfer of New Orleans. The Senate acquitted him. Mar. 3, 1803, Judge John Pickering, of the Federal court of N. H., was impeached and removed from the bench for drunkenness and profanity. Mar. 13, 1804, Judge Samuel Chase, of Md., an associate-justice of the U. S. Supreme Court, was impeached for arbitrary conduct and the introduction of political matter into his charges to grand juries, but on trial he was acquitted. Dec. 13, 1804, Judge James H. Peck, of the Federal court of Mo., was impeached for punishing as contempt of court a criticism of his opinions. He was acquitted. May 6, 1862, Judge West H. Humphreys, of the Federal district court of Tenn., was impeached and afterward removed, upon the charge of disloyalty and aiding the rebellion. The vote of the Senate was unanimous. Feb. 4, 1868, the House impeached Andrew Johnson, President of the U. S., for having removed Secretary of War Stanton in violation of the tenure-of-office act; for having appointed Gen. Lorenzo Thomas Secretary of War, contrary to the same act; for conspiracy with Thomas and others for the intimidation of Stanton; for the unlawful disbursement of the War Department's moneys; and for inducing Gen. Emory to disobey orders. The House adopted the impeachment resolution by a vote of 126 to 42. President Johnson was acquitted by the Senate by a vote of 35 for conviction to 19 against, two-thirds being required. (See JOHNSON, ANDREW.) Mar. 2, 1876, Secretary of War W. W. Belknap was impeached on the charge of bribery, in the matter of making appointments. He resigned a few hours before the impeachment resolution passed, and the House and the President accepted his resignation. Aug. 1, 1876, he was acquitted by a vote of 36 for conviction to 25 for acquittal. The minority held that, as he was out of office he was not liable to impeachment. (See JOHNSON, ANDREW, 341.)

Imperial City, The.—A name commonly applied to Rome.

Impey, Sir Elijah.—(1732-1809.) A celebrated English jurist. He was appointed first chief-justice of Bengal in 1774, and was closely identified with Warren Hastings in his work in India.

Import.—Government tax on imported goods.

Impressionists.—A term belonging to the modern school of art, which had its source in France, and of which Édouard Manet, the French genre painter, was the founder. Its disciples endeavor to free themselves from the trammels of artistic tradition, and to portray nature in a fresh and original manner. They avoid the conventionalities of lighting, composition, etc., which have been accepted by the art of the past, and strive to render with truth their impressions of nature. They are partly at one with the Pre-Raphaelites; but while the latter studied nature in a detailed and analytical manner, the former portray only such of her salient features as are visible in a cursory examination, and these they render usually by brush-work of the freest, slightest, and loosest description. They are further separated from the Pre-Raphaelites by the absence of intellectual or emotional interest in their pictures. Care for beauty of color, form, or expression is hardly visible in their work; indeed, they more often fall into the depths of ugliness and vulgarity.

Impressment.—The act of compelling persons to enter the public service, usually applied to the seizure of sailors for service on naval vessels. Great Britain has always claimed the right to levy land and naval forces in time of war by compulsory process. The exercise of this claim was among the causes that led to the War of 1812. Great Britain refused to allow the right of her seaman to change their allegiance by naturalization, and insisted upon the right to search neutral vessels, and decide by her own officers, who among the crew of such neutral vessels were British subjects. Many American sailors were in this way impressed into the British service, although by the Treaty of Ghent, Great Britain did not relinquish this claim, it has long since been abandoned as far as U. S. vessels are concerned.

Inattention, as a Childish Fault.—906.

Inauguration Day.—The selection of Mar. 4, as the day for the inauguration of the President and Vice-president of the U. S., dates back to 1788. After the ratification of the Constitution by the several states, the Congress of the old Confederation fixed upon the first Wednesday in Jan., 1789, for the choice of electors, the first Wednesday in Feb. for the popular voting by the electors, and the first Wednesday in Mar., for the inauguration of the President. The latter day fell on the 4th in that year, and the twelfth amendment to the Constitution settled upon this as the legal date. Washington's first inauguration was, however, on April 30, 1789. Measures have been frequently introduced, in both houses of Congress, for an amendment to the Constitution changing Inauguration Day to a later date in the year.

Incas.—The rulers of Peru from the 13th to the 16th century.

Inchbald, Mrs. Elizabeth Simpson.—(1753-1821.) An English actress, dramatist, and novelist.

Inclined Ladder.—1843.

Inclined Poles, Double the.—1841.

Income and Rent.—2210.

Income Tax.—A form of direct tax upon annual incomes in excess of a specified sum. An income tax has been levied by the U. S. Government but twice in its history. Aug. 5, 1861, as a war revenue measure, Congress authorized a tax of 3 per cent. on all incomes over \$800 per annum. July 1, 1862, an act was passed taxing all incomes under \$5,000, 5 per cent., with an exemption of \$600 and house rent actually paid. Incomes of more than \$5,000 and less than \$10,000 were taxed 2½ per cent. additional, and incomes of more than \$10,000, 5 per cent. additional, with no exemptions. A tax of 5 per cent. on incomes of Americans living abroad and of 1½ per cent. on incomes from U. S. securities was also levied. In 1864 a special tax of 5 per cent. was imposed on all incomes between \$600 and \$5,000, and 10 per cent. on incomes of more than \$5,000. This law was repealed in 1872. The amount collected under it was \$346,911,760. In August, 1894, the Wilson tariff law imposed a tax of 2 per cent. on all incomes in excess of \$4,000. The Supreme Court in 1895 decided this to be unconstitutional.

Indemnity.—Guarantee against loss.

Independence Hall.—In Philadelphia, the building in which the Declaration of Independence was adopted by Congress and read to the people July 4, 1776. It was here that Washington was chosen commander-in-chief, in 1775. At present it is used as a museum of historical relics.

India.—The great central peninsula of southern Asia, bounded on its northern, landward base by the Himalayas and the rivers Indus and Brahmaputra. Politically, it consists of the British provinces of Bengal, Bombay, Burma, the Northwest Provinces and Oudh, etc., embracing (1901) an area of 964,993 square miles, with an estimated population of about 231,085,132. It further embraces the great native and feudatory states, subordinate in the main to Britain as the suzerain power, and having an area of 755,695 square miles, with a population of about 63,181,569. The supreme authority, both executive and legislative, is vested in the governor-general in council, under the British Secretary of State for

India, who is responsible to Parliament. The seat of local government is Calcutta. Bombay and Madras are styled Presidencies, and enjoy a certain precedence, while the Northwest Provinces and Bengal are under a lieutenant-governor, and Assam and the Central Provinces are

under government. The Hindoo religion is that of three-fourths of the population (207 million); the Mohammedans number about 58 million; the Buddhists, 7 million; the Anamistics 9 million; and the Christians about 2½ million. The chief products are rice, wheat and other food grains, sugar, cotton, tea, oil-seeds, indigo, tobacco, and opium: hides and skins, wool, jute, spices, dyes and tans are also among the exports. Among the principal cities of India are Calcutta, Bombay, Madras, Haidarabad, Lucknow, Benares, Delhi, Mandalay, Cawnpore, Bangalore, Lahore, Allahabad, Agra, Patna, and Poona. India has now in operation about 24,000 miles of railroad.

Indiana.—The name signifies "land of Indians"; one of the Central States of the America Union. Bounded on the north by Michigan and Lake Michigan, east by Ohio, south by Kentucky, west by Illinois. It was settled by the French at Vincennes and elsewhere in the 18th century; was ceded to Great Britain in 1763, and to the United States in 1783; became part of the Northwest Territory, was made a separate territory in 1800, and was admitted to the Union in 1816. The surface is generally level, and agriculture is the chief industry; wheat and corn are the staple products. The capital is Indianapolis, which is also its largest city; other flourishing towns are Evansville, Fort Wayne, Jeffersonville, Logansport, Madison, Elkhart, New Albany, Richmond, Terre Haute, South Bend, Vincennes. Area, 36,350 sq. miles; pop. (1900), 2,516,462; called the Hoosier State.

"Indiana," The.—A battleship of U. S. navy, that participated in the battle of Santiago, July 3, 1898.

Indian Affairs, Bureau of.—A bureau of the Dept. of the Interior. Previous to 1832 all business relating to the Indians had been transacted by the clerks of the War Dept. By this time, however, the business relations between the government and the Indians had grown to such proportions that it became necessary to establish a Bureau of Indian Affairs. Accordingly, Congress authorized the President to appoint a commissioner, who should have general superintendence, under the Secretary of War, of all Indian affairs. The first commission was appointed July 9, 1832. In 1849 the Dept. of the Interior was created, and the Bureau of Indian Affairs was transferred thereto.

Indianapolis.—The capital city of Ind.; it is an important railway center and has pork-packing and milling industries. Pop. (1900), 169,164.

Indian Bean, The.—2823.

Indian Club, The.—1826.

Indian Mutiny, or Sepoy Mutiny.—The revolt against British authority in India, 1857-58.

Indian Mythology, American.—1646.

Indian Ocean.—That part of the ocean lying between Asia, Africa, Australia, and the Malay Archipelago. The Bay of Bengal and the Arabian Sea are its chief arms.

Indian Territory.—One of the western territories belonging to the United States of America.



under commissioners. Some of the native or feudatory states pay tribute to the supreme

Bounded on the north by Kansas, east by Missouri and Arkansas, south by Texas, west by Oklahoma. The region acquired was part of the Louisiana Purchase in 1803 and part from Mexico in 1845; in 1834 it was set apart for the Indians who were removed from their original home; in the Civil War the Indians sided with the Confederates and it was necessary to send a force of cavalry to subdue them. At this time (1901) the territory is unorganized; the Indian tribes—Cherokees, Choctaws, Chickasaws, Creeks, and Seminoles—conduct their own affairs. The surface is generally level and rolling, and herding is the chief industry; Tahlequah, in the Cherokee land, is the chief town; area, 31,400 sq. miles; pop. (1900), 392,060.

Indian Turnip.—2894.

India Rubber.—This interesting and useful substance is obtained from the sap of several varieties of trees that grow in Central Africa, the East Indies, and the valley of the Amazon in South America. It is from the Amazon region that most of the rubber used in the United States is obtained.

The sap of the rubber trees is collected by the natives of tropical countries in much the same way that the maple sap is collected for making maple sugar. As it exudes from the incisions made in the bark of the trees the rubber sap is a milky fluid and so viscid that only a few ounces of it flow from a tree in a day. In the course of the collecting season, however, a large tree will yield about twenty gallons of sap, from which forty pounds of rubber will be obtained.

To convert the sap into rubber it must be dried in the sun or over a fire. The latter method is that most commonly employed; it is carried out by dipping a broad-bladed wooden paddle into the sap and holding it for a few minutes in the smoke arising from the fire, and then repeating the operation as soon as a layer of rubber forms on the paddle. In this way, a ball weighing ten or twelve pounds is soon formed on the paddle, and in that form the rubber is ready for market.

The manufacture of articles of all sorts from rubber begins with the purification of the crude rubber. For that purpose the lumps of rubber are first boiled for some time in order to soften them, and are then torn to shreds by cylinders armed with knives. The tearing is done in a stream of water that washes away the impurities and leaves the rubber ready for the subsequent processes of manufacture, the nature of which is determined by the character of the articles to be made.

Formerly, all articles of rubber were made from the pure rubber, but now almost all the rubber we see has been treated by a process known as vulcanizing, by which its fitness for most purposes is greatly increased. This process consists in mixing the shreds of rubber with a varying quantity of sulphur and heating it for a certain length of time. By using a small proportion of sulphur and heating for a short

time soft rubber is obtained, and by using a larger proportion of sulphur and heating for a longer time, hard rubber is produced. See p. 2963.

Indians.—The aboriginal inhabitants of America. When Columbus sighted the coast of America he thought he had discovered the eastern shore of India. This was soon found to be an error, but the name "Indians" has continued to be applied to these prehistoric people of both North and South America. As they were mostly barbarous, and as those who were partly civilized possessed no written records, their origin and history became a problem for the ethnologist. Those of South America were divided by Morton into two classes: the Toltec nations, who were partly civilized, and the semi-barbarous tribes. The former included the Mexicans and the Peruvians, and the latter all the other peoples. Many ethnologists claim that the American Indians are a distinct type of the human race, as natural to this continent as its flora and fauna, and as having existed as such from the earliest ages of the world. Others regard them as a branch of the Mongolian race, which at a remote period of history wandered from Asia to America and there remained for thousands of years separated from the rest of mankind, passing through various stages of progress and retrogression. Anthropologists admit that between the various tribes from the Arctic Seas to Cape Horn there is greater uniformity of physical structure and personal characteristics than is seen in any other part of the globe. In manners, customs, and general features the difference between the Indians of the shores of the northern lakes and those of the Gulf States is scarcely perceptible; it is only by languages or dialects that they can be classified or grouped. Though the red men of Canada differ in many respects from the wandering Guarani of Paraguay and both differ from the Aztecs of Mexico, all exhibit strong evidence of belonging to the same great branch of the human family. Their physical characteristics are usually: a low broad forehead; full face; head flattened at the back; powerful jaws; full lips; prominent cheek bones; dark, deeply-set eyes; long and wavy hair; no beard; copper-colored skin; erect and slender figures; about the average in height. In Mexico and Peru the Indians developed a great degree of civilization. They made laws, and considerable advances in the arts and sciences; lived in walled cities, which were governed by local councils; and, considering their spare opportunities, their system of government excelled anything of the period. Taking similarity of language as a basis of grouping, the Indians of North America were divided into sixty linguistic stocks. The most important were: Eskimauan, Athapaskan, Algonquian, Siouan, Iroquoian, Salinan, Shoshonean, Muskogean, Caddoan, Yuman, Piman, Sahaptian, Kiowan, and Timuquanau. East of the Mississippi there were not more than eight distinct languages, four of which are still in existence. The

- tribes with which the U. S. have had dealings are mentioned under separate heads. The number of Indians in the U. S. at the present time is about 300,000.
- Indifference as a Childish Fault.**—906.
- Indigestion.**—1090.
- Indigo.**—A substance obtained in the form of a powder from leguminous plants of the genus *Indigofera*; used as a blue dye. These plants belong to the natural order *Leguminosæ*, sub-order *Papilionaceæ*.
- Indo-China.**—Possessions of France in Farther India, on the Annamese peninsula. They include the French dependencies of Cochin-China, Tonquin, Annam, and Cambodia, with a united area of about 363,000 square miles, and an estimated population of 22,680,000. Since 1887, the above possessions have been united into a Customs Union, and their affairs are administered under a governor-general. Cochin-China and Cambodia were acquired in 1861-62, and Tonquin, Laos, and Annam in 1884. The chief products are rice, betel, tobacco, indigo, peppers, cinnamon, dyes, rubber, and medicinal plants. Cotton, sugar-cane, and the silk tree are also grown, while there is also much valuable timber and considerable mineral wealth. Railway communication is now being projected.
- Indore.**—(1) In India, a native state under the control of the Central India Agency. (2) The capital of Indore. Pop. about 93,000.
- Indorsement.**—Indorsement is the term generally used to denote the writing of the name of the holder on the back of a bill of exchange or promissory note, on transferring or assigning it to another.
- Indra.**—Hindoo god: 1540.
- Indus River.**—One of the chief streams of India, has its source in the Himalayas of Tibet. It flows at first northwest through Kashmir, then turns south, and passes through the provinces of the Panjab and Sind, into the Arabian Sea, below the city of Hyderabad. Its principal affluents are the Sutlej, Jhelum, Chenab, Ravi, and the Kabul. Its entire length is about 1,800 miles; but it is navigable from its mouth only as far as Rori, in the northern part of Sind.
- Industrial Difficulty and the Way Out, The.**—5190.
- "Infanta Maria Teresa."**—The flagship of Admiral Cervera in the Spanish-American War. She was sunk in the battle of Santiago in 1898 but was raised under the direction of Naval-constructor Hobson. While being towed to the U. S. she was abandoned in a strong gale off San Salvador and subsequently became stranded on Cat Island.
- Infant Feeding.**—669.
- Influence of the Bible.**—3021.
- Infusoria, The.**—See **RADIATES**, 2713.
- Ingalls, John James.**—(1833-1900.) A distinguished American statesman. United States senator from Kansas from 1873-91, president *pro tem.* of the Senate the last three years of that period.
- Ingelow, Jean.**—(1820-1897.) A noted English poet and novelist.
- Ingersoll, Robert Green.**—(1833-1899.) A noted American lawyer, lecturer, and writer.
- Ingham, Col. Frederic.**—The pseudonym of Edward Everett Hale, author of the "Ingham Papers," etc.
- "Ingoldsby Legends."**—A collection of remarkable legends in prose and verse, supposed to have been found in the family chest of the Ingoldsby family and related by Thomas Ingoldsby, a pseudonym assumed by the Rev. Richard Harris Barham (1788-1845). The legends first appeared in "Bentley's Magazine," London, and attracted much notice for their originality of design and diction, and for the quaint illustration and musical character of their verse. Of the work as a whole it has been said that "such drollery invested in rhyme has never been so amply or so felicitously exemplified since the days of *Hindibras*."
- Ingraham, Joseph Holt.**—(1809-1860.) An American clergyman and novelist; author of "The Prince of the House of David."
- Ingres, Jean Auguste Dominique.**—French painter, 3457.
- Inkerman.**—In Russia, a town in the Crimea; the scene, Nov. 5, 1854, of the defeat of the Russians by the English and French. The town is now in ruins.
- "In Memoriam."**—An elegiac poem, written by Alfred Tennyson and published in 1850; a lament for his friend, Arthur Henry Hallam.
- Inness, George** (1825-94).—Distinguished American painter, 3523.
- Innocuous Desuetude.**—This phrase occurs in a message of President Cleveland to Congress, Mar. 1, 1886, when he was discussing the subject of suspensions from office. The Senate had asked him his reasons for suspending certain officials. The phrase, which means "fallen into disuse," was taken up by the people and was not permitted, itself, to pass into "desuetude."
- Innsbruck, or Innspruck.**—In Austria, the capital of Tyrol. Noted for the picturesqueness of its environment. The scene of severe warring between the Tyrolese and the Bavarians in 1809.
- Inquisition, The.**—An ecclesiastical court, officially styled the Holy Office, for the suppression of heresy and punishment of heretics. From the original establishment of Christianity as the religion of the Roman Empire, laws existed, more or less severe, for the repression and punishment of dissent from the national creed, but the Inquisition proper, as a recognized court for this purpose was really not organized until Emperors Theodosius and Justinian appointed officers called "inquisitors" whose special duty was to discover, and prosecute before the civil tribunals, offenses of this class. Heresy at this period was regarded as a crime against the State as well as the Church. Under Innocent IV. (1248) it gathered strength and its powers were vested entirely in the then recently established Dominican Order. It then became a general, instead of, as formerly, a local tribunal, and was introduced in succession into Italy, Spain, Germany, and the southern provinces of France. In procedure: The party, if suspected of heresy was liable to arrest and detained in prison, only to be brought to trial when it seem fit to his

judges. The proceedings were conducted secretly, and the accused was liable to be put to torture to extort a confession of his guilt. The punishments of guilt were death by fire, death on the scaffold, imprisonment in the galleys for life or for a limited term, forfeiture of personal property, civil infamy, and, in minor cases, retraction and public penances.

Inquisitiveness as a Childish Fault.—925.

Insects, Collecting.—2747.

Insolvent.—One unable to pay outstanding debts.

Institute of France, established by the French directory in 1795 to take the place of the academies suppressed by the convention two years previously. It now consists of the members of the L'Académie Française, L'Académie des Inscriptions et Belles-Lettres, L'Académie des Sciences, L'Académie des Beaux-Arts, and L'Académie des Sciences Morales et Politiques. Each academy has its own separate organization and work, and participates besides in the advantages of the common library, archives, and funds. The members are paid each a sum by the government annually, and the government also votes a yearly amount for the maintenance

of the institute. Membership in the Académie Française is limited to forty Frenchmen.

Insurance.—Insurance is a contract under which one party, called the insurer, agrees, in consideration of a sum of money called the premium, to pay a larger sum of money to another party, called the insured, on the happening of a designated contingency. Insurance has sometimes been said to be akin to gambling, but it is really the opposite. The gambler seeks excitement and gain by the artificial manufacture of hazardous speculations. The prudent man resorts to insurance in order to secure peace of mind and immunity from the loss which might arise from contingencies beyond his control. The gambler creates or exaggerates risks; the insurance office equalizes them.

In round numbers, the total amount of life insurance written by the different insurance companies of the world is, \$12,000,000,000. Of this sum \$5,500,000,000 is placed in the United States. Between the years 1880 and 1890 there was \$2,500,000,000 new life insurance written in this country, and but \$1,000,000,000 in the whole British empire.

INTEREST LAWS AND STATUTES OF LIMITATIONS

STATES AND TERRITORIES	INTEREST LAWS		STATUTES OF LIMITATIONS			STATES AND TERRITORIES	INTEREST LAWS		STATUTES OF LIMITATIONS		
	Legal Rate	Rate Allowed by Contract	Judgments, Years	Notes, Years	Open Accounts, Years		Legal Rate	Rate Allowed by Contract	Judgments, Years	Notes, Years	Open Accounts, Years
Alabama	8	8	20	6*	3	Nebraska	7	10	5††	5	4
Arkansas	6	10	10	5	3	Nevada	7	Any rate	6	6	4
Arizona	6	Any rate	5	4	3	N. Hampshire	6	6	20	6	6
California	7	Any rate	5	4†	2	New Jersey	6	6	20	6	6
Colorado	8	Any rate	10††	6	6	New Mexico	6	12	7	6	4
Connecticut	6	(j)	†	(e)	6	New York	6	6††	20(i)	6	6‡‡
Delaware	6	6	20	6‖	3	North Carolina	6	6	10	3*	3
D. of Columbia	6	10	12	3	3	North Dakota	7	12	10	6	6‡‡
Florida	8	10	20	5	2	Ohio	6	8	5††	15	6
Georgia	7	8	7	6	4	Oklahoma	7	12	5(h)	5	3
Idaho	7	12	6	5	4	Oregon	6	10	10	6	6
Illinois	5	7	20	10	5	Pennsylvania	6	6	5(f)	6‖	6
Indiana	6	8	20	10	6	Rhode Island	6‡	Any rate	20	6	6
Iowa	6	8	20(d)	10	5	South Carolina	7	8	10	6	6
Kansas	6	10	5	5	3	South Dakota	7	12	10(l)	6	6
Kentucky	6	6	15	15	5(σ)	Tennessee	6	Any rate	10	6	6
Louisiana	5	8	10	5	3	Texas	6	10	10††	4	2
Maine	6	Any rate	20	6‖	6‡‡	Utah	8	Any rate	8	6	4
Maryland	6	6	12	3	3	Vermont	6	6	8	6	6‡‡
Massachusetts	6	Any rate	20	6	6	Virginia	6	6	20	5*	2†
Michigan	5	7	6*	6	6‡‡	Washington	7	12	6	6	3
Minnesota	6	10	10	6	6	West Virginia	6	6	10	10	3
Mississippi	6	10	7	6	3	Wisconsin	6	10	20(i)	6	6
Missouri	6	8	10	10	5	Wyoming	8	12	5(k)	5	8
Montana	10	Any rate	10(b)	8	3						

* Under seal, 10 years. †If made in state, if outside, 2 years. ‡No law and no decision regarding judgments. §Unless a different rate is expressly stipulated. ‖Under seal, 20 years. ¶Store accounts, other accounts 3 years. ††New York has by a recent law legalized any rate of interest on call loans of \$5,000 or upward, on collateral security. †††Becomes dormant, but may be revived. ‡‡Six years from last item. (a) Accounts between merchants 2 years. (b) In courts not of record, 5 years. (d) Twenty years in Courts of Record; in Justice's Court 10 years. (e) Negotiable notes 6 years, non-negotiable 17 years. (f) Ceases to be a lien after that period. (h) On foreign judgments 1 year. (i) Is a lien on real estate for only 10 years. (j) Any rate, but only 6 per cent. can be collected at law. (k) And indefinitely by having execution issue every 5 years. (l) Ten years foreign, 20 years domestic.

SIMPLE INTEREST TABLE

(Showing at different Rates the Interest on \$1 from 1 Month to 1 Year, and on \$100 from 1 Day to 1 Year.)

TIME	4 PER CENT			5 PER CENT			6 PER CENT			7 PER CENT			8 PER CENT		
	Dollars	Cents	Mills	Dollars	Cents	Mills	Dollars	Cents	Mills	Dollars	Cents	Mills	Dollars	Cents	Mills
One Dollar 1 month	3	..	..	4	..	..	5	..	..	5	..	..	6
" 2 "	7	..	..	8	..	..	1	..	..	1	..	..	1
" 3 "	..	1	1	..	1	3	..	1	5	..	1	7	..	2	3
" 6 "	..	2	..	..	2	5	..	3	..	..	3	5	..	4	..
" 12 "	..	4	..	..	5	..	..	6	..	..	7	..	..	8	..
One Hundred Dollars 1 day	..	1	1	..	1	3	..	1	6	..	1	9	..	2	2
" 2 "	..	2	2	..	2	7	..	3	2	..	3	8	..	4	4
" 3 "	..	3	4	..	4	1	..	5	..	..	5	8	..	6	7
" 4 "	..	4	5	..	5	3	..	6	6	..	7	7	..	8	9
" 5 "	..	5	6	..	6	9	..	8	2	..	9	7	..	11	1
" 6 "	..	6	7	..	8	3	..	10	..	..	11	6	..	13	3
" 1 month	..	33	4	..	41	6	..	50	..	..	58	3	..	66	7
" 2 "	..	66	7	..	83	2	..	1	..	..	16	6	..	1	3
" 3 "	..	1	..	..	1	25	..	1	50	..	1	75	..	2	..
" 6 "	..	2	..	..	2	50	..	3	..	..	3	50	..	4	..
" 12 "	..	4	..	..	5	..	..	6	..	..	7	..	..	8	..

COMPOUND INTEREST TABLE

COMPOUND INTEREST OF ONE DOLLAR FOR 100 YEARS.

AM'T	Years	Per cent.	Accumulation	AM'T	Years	Per cent.	Accumulation	AM'T	Years	Per cent.	Accumulation
\$1	100	1	\$2.70,5	\$1	100	4½	\$ 81.58,9	\$1	100	10	\$ 13,780.66
1	100	2	7.24,5	1	100	5	131.50,1	1	100	11	34,064.34,6
1	100	2½	11.81,4	1	100	6	339.30,5	1	100	12	83,521.82,7
1	100	3	19.21,8	1	100	7	867.72,1	1	100	15	1,174,302.40
1	100	3½	31.19,1	1	100	8	2,199.78,4	1	100	18	15,424,106.40
1	100	4	50.50,4	1	100	9	5,529.04,4	1	100	24	2,198,720,200

YEARS IN WHICH A GIVEN AMOUNT WILL DOUBLE AT SEVERAL RATES OF INTEREST

RATE	At Simple Interest	AT COMPOUND INTEREST			RATE	At Simple Interest	AT COMPOUND INTEREST		
		Compounded Yearly	Compounded Semi-Annually	Compounded Quarterly			Compounded Yearly	Compounded Semi-Annually	Compounded Quarterly
1	100 years	69.660	69.487	69.237	6	16.67	11.896	11.725	11.639
1½	66.66	46.556	46.382	46.297	6½	15.38	11.007	10.836	10.750
2	50.00	35.003	34.830	34.743	7	14.29	10.245	10.074	9.966
2½	40.00	28.071	27.899	27.748	7½	13.33	9.584	9.414	9.328
3	33.33	23.450	23.278	23.191	8	12.50	9.006	8.837	8.751
3½	28.57	20.149	19.977	19.890	8½	11.76	8.497	8.327	8.241
4	25.00	17.673	17.501	17.415	9	11.11	8.043	7.874	7.788
4½	22.22	15.747	15.576	15.490	9½	10.52	7.638	7.468	7.383
5	20.00	14.207	14.035	13.949	10	10.00	7.273	7.103	7.018
5½	18.18	12.942	12.775	12.689	12	8.34	6.116	5.948	5.862

Interior, Department of.—One of the executive departments of the U. S. Government. It was created by act of Congress, approved Mar. 3, 1849, and in the original law was called the Home Department. Its head is a Secretary of the Interior, who is appointed by the President, and has a seat in the Cabinet. The department has charge of all public business relating to pensions, patents, public lands, Indians, rail-

roads, education, national parks, geological survey, the census, certain public documents, judicial accounts, mines and mining, etc.

Interlaken.—In Switzerland, a popular summer resort in the canton of Bern.

Internal Improvements.—There is no provision in the Constitution for internal improvements by the national government, and the matter has always been a subject of dispute. Since Aug. 7,

1789, Congress has regularly appropriated money for such improvements as lie strictly within the Federal Jurisdiction—harbors, beacons, buoys, lighthouses, piers, etc. March 29, 1806, Congress authorized the President to appoint three commissioners to lay out a national road from Cumberland, on the Potomac, to the Ohio River, and appropriated \$30,000 for the cost. The road was to pass through several states. A national road was also projected through La. with New Orleans as the proposed western terminus. Several bills for national improvements were vetoed by Presidents Madison, Monroe, and Jackson. March 14, 1818, the House of Representatives passed a resolution declaring that Congress had the power to appropriate money for the construction of roads and canals, and for the improvement of water courses. March 3, 1823, the first appropriation for the improvement of rivers and harbors passed Congress. In April, 1824, \$30,000 was appropriated for the survey of such roads and canals as the President should deem of national importance, and the act of Mar. 3, 1825, authorized the subscription of \$300,000 to the stock of the Chesapeake and Delaware Canal. River and Harbor bills have been vetoed by Presidents Tyler, Polk, Pierce, Grant, Arthur, and Cleveland. Appropriations for the improvement of rivers and harbors have sometimes been attached to general appropriation bills. Appropriations for rivers and harbors have increased from \$2,000,000 in 1870 to nearly \$30,000,000 in 1896. Not all of the latter sum, however, was to be expended in one year.

Internal Revenue.—That part of the revenue of a country which is derived from duties or taxes on articles manufactured or grown at home; in fact, all revenue not collected on imports. The internal revenue of the U. S. is derived chiefly from taxes on liquors and tobacco, and, in cases of emergency, upon commercial paper, bank circulation, and upon incomes. The receipts from these various sources have varied from \$1,000,000 in 1801, to \$309,000,000, which was reached during the operation of the war tax in 1866. Later the internal taxes settled down to a normal basis of something like \$150,000,000 a year. In 1892 \$154,000,000 was collected and in 1896 \$146,000,000. During the Spanish-American War, the amount was much increased by a stamp tax on a large number of articles and commercial instruments. Most of this tax was taken off in 1901.

International American Conference.—Oct. 2, 1889, on the invitation of the U. S., an international conference of representatives of the U. S. and of 17 states of Central and South America, including Mexico and Haiti, assembled at Washington. The conference is known as the Pan-American Congress. The object was to adopt some plan of arbitration for the settlement of disputes, and also for the improvement of business relations and means of communication between the countries. Santo Domingo was the only state to refuse the invitation. Before assembling

as a congress, the delegates were taken on a tour of the country, to give them an idea of the extent and resources of the U. S. After traveling 6,000 miles, they returned to Washington. The proceedings of the congress resulted in extending a knowledge of the commercial status of the various countries and the publication of an extensive series of debates and recommendations. The body adjourned Apr. 19, 1900. The Bureau of American Republics was established at the suggestion of this congress.

International Law.—The system of rules which sovereign states acknowledge as regulating the intercourse between them and determining their rights and obligations.

Interstate Commerce.—Commercial transactions and intercourse between residents in different states, as carried on by lines of transportation extending from one state into another or others. Power to regulate commerce between the states is vested in Congress by the Constitution. It is held that the power to regulate commerce of necessity included the power to regulate the means by which it is carried on, so that the scope of authority given to Congress by this clause enlarges with the development of the industries of the country and the means of communication. The intent of the framers of the Constitution was to prohibit legislation by any state against the business interests of another state, by taxation discrimination or otherwise. It was intended also as a check upon the arbitrary power of state legislatures, rather than upon private corporations, such as railroad companies. With the development of the great railway lines, traversing many states and bringing remote interior producers into close communication with the seaboard markets, came the necessity for regulating the rates of transportation by a more general law than it was within the power of the state to enact. It was charged against the railroads that they discriminated in favor of certain firms, or those in certain cities, and made contracts by which their goods were carried over long distances at lower rates than were demanded for carrying short distances like goods for other shippers. The railroads claimed that competition between trunk lines forced them to take the long distance freight at nearly the same rates as they received for local freight where there was no competition. It was asserted that the railroads did not regulate freight rates at the cost of carrying, but by what the business would bear. The first attempt in Congress to regulate interstate commerce was in 1873, previous to which time the Grangers had secured in some states the passage of laws for the regulation of railroad charges. These were in the western sections of the country. In 1878 John H. Reagan, of Tex., introduced a series of bills in the House which culminated Feb. 4, 1887, after long debates on these and similar bills, in the act to regulate interstate commerce. This law established an interstate commerce commission of

five to investigate complaints. It furthermore gives shippers the option of complaining to this commission or of instituting suits in the Federal courts, and prohibits unjust discrimination between persons and places, the giving of special rates, etc., though the commissioner may suspend this rule in special cases. It requires railroads to publish their rates and to adhere to them, and forbids "pooling" in freights by competing railroads.

Intestacy.—The state of a person who has died without leaving a will. Every person has the right, as one of the incidents of ownership, to regulate the succession of his property after his death. In all places the principle is that if no will or deed equivalent to a will is executed, or if a will executed is invalid from defect of form, an intestacy follows and the law provides an heir or next of kin in lieu of the owner himself doing so.

In transitu (Latin).—In transit.

"Intrepid," The.—A Tripolitan ship captured and so named by the Americans, in which Stephen Decatur on the night of Feb. 16, 1804, sailed into the port of Tripoli and recaptured and burned the U. S. frigate "Philadelphia." It was afterward blown up in order to destroy Tripolitan cruisers.

Introductions, Social.—2215.

Invention and its Relation to War.—5128.

Invention, Great Problems of.—5118.

Inventions.—The man who invented the return ball, an ordinary wooden ball with a string attached to pull it back, made \$1,000,000 from it.

Every one has seen the metal plates that are used to protect the heels and soles of rough shoes, but every one doesn't know that within ten years the man who hit upon the idea has made \$250,000.

One of the cleverest inventions ever passed on by the Patent Office, is the machine for sticking common pins into the papers in which they are sold. The contrivance brings up the pins in rows, draws the paper into position, crimps it into two lines, then, at a single push, passes the pins through the paper and sets them into position. The machine almost seems to think as it works and to examine the paper to see if it is properly folded before pushing the pins into place.

The gimlet-pointed screw has produced more wealth than most silver mines, and the Connecticut man who first thought of putting copper tips on the toes of children's shoes is as well off as if he had inherited \$1,000,000, for that's the amount his idea has realized for him.

INVENTIONS, SYNOPSIS OF GREAT.

INVENTION	INVENTOR	DATE
Air Gun.....	Mariu	1595
Air Pump.....	Otto von Guericke.....	654
Anchor.....	Anacharsis.....	594 B.C.
Balloon.....	Montgolfier.....	1783
Barometer.....	Evangelista Torricelli.....	1643
Bellows.....	Anacharsis the Scythian.....	593 B.C.
Cannon.....	Chinese.....	About 618 B.C.
Clock.....	First one erected in Padua.....	11th century
Compass.....	Chinese.....	1115 B.C.
Cottou Gin.....	Eli Whitney.....	1793
Dial.....	Anaximander.....	550 B.C.
Electric Light.....	Sir Humphry Davy.....	1813
Engraving.....	Chinese.....	1000 B.C.
Fire Arms.....	Unknown.....	1364
Fire Engine.....	Hautsch.....	1657
Gas.....	Van Helmount.....	1600-1625
Gas Meter.....	Clegg.....	1815
Geographical Maps.....	Anaximander.....	550 B.C.
Glass.....	Phoenicians.....	.....
Gunpowder.....	Berthold Schwarz.....	1320
Hydraulic Press.....	Joseph Bramah.....	1796
Lightning Conductor.....	Benjamin Franklin.....	1752
Locomotive.....	Watt.....	1759
Matches.....	Walker.....	1827
Organ.....	Archimedes and Ctesibius.....	220-100 B.C.
Phonograph.....	Thomas A. Edison.....	1877
Photography.....	Thomas Wedgwood.....	1802
Piano Forte.....	Bartolommeo Cristofali.....	1714
Printing.....	Johann Guttenberg.....	1438
Railroad.....	Beaumont.....	1672
Sewing Machine.....	Elias Howe.....	1841
Steamboat.....	Robert Fulton.....	1807
Steam Engine.....	James Watt.....	1763
Telegraph.....	Samuel F. B. Morse.....	1837
Torpedo.....	David Bushnell.....	1777
Telephone.....	Gray, Bell, Dolbear, Edison.....	1877
Telescope.....	Lippersheim and Adriausz.....	1608
Thermometer.....	Drebbel.....	1609
Watch.....	Said to have been first invented at Nuremberg.....	1477

Inventor, How to Succeed as an.—5125.

Inventory.—A list of goods and merchandise on hand.

Inverness.—(1) A county of Scotland, noted for its beautiful scenery. (2) A seaport and the capital of the county of Inverness; an important trade center.

Iodine.—One of a group of four non-metallic elements to which the term Halogens is applied. It derives its name from iodes (Gr.) "violet-like" in consequence of its magnificent purple color when in a state of vapor. It fuses at 225°; is slightly soluble in water, and dissolves readily in watery solutions of iodide of potassium, and of hydriodic acid and in alcohol and ether. Iodine vapor is the heaviest of all known vapors, its specific gravity being 8.716.

Iodoform.—A solid compound similar to chloroform and is produced by the action of iodine with al-

kalis or alkali carbonates on alcohol. It is an anesthetic, an antiseptic, and is used in surgical dressings.

Ion.—In Greek mythology the ancestor of the Ionians.

Ionia.—A fertile country which according to Ptolemy extended from the River Herinus to the River Mæander along the coast of the Ægean Sea. In ancient times it was the most flourishing country in Asia Minor and received its name from the Ionians, who according to the mythological account derived theirs from Ion, the son of Apollo by Creusa, a daughter of a king of Athens. Ionia reached a high point of prosperity; agriculture and commerce flourished, and great cities arose of which Ephesus, Smyrna, Clazomenæ, Erythræ, Colophon, and Miletus were the most celebrated. The country was reduced by the kings of Lydia, and in 557 B.C. passed under the sway of the Persians. After the battle Mycale (479 B.C.) the Ionians entered into an alliance with Athens upon which they shortly after became dependent. After the Peloponnesian War they were subject to the Spartans; in 387 B.C. again to the Persians until the time of Alexander the Great. It was added to the Roman empire in 64 B.C. by Pompey, and in later times was so ravaged by the Turks that little of its former greatness is now left.

Ios.—An island of the Ægean Sea; the modern Nio; a possession of Greece.

Iowa.—One of the Northwestern States of the United States. Bounded on the north by Minnesota, east by Wisconsin and Illinois, south by Missouri, west by Nebraska and South Dakota. It was part of the Louisiana Purchase and was included, successively, as boundaries were changed, in the territories of Missouri, Michigan, and Wisconsin; the first permanent settlement was made at Burlington in 1833; population grew rapidly by immigration and Iowa was made a separate territory in 1838 and was admitted to the Union in 1846. The surface is mostly level and the state is largely devoted to agriculture, the cereals being its chief products; coal and lead are mined in considerable quantities. The capital is Des Moines, and other important towns are Burlington, Council Bluffs, Clinton, Davenport, Dubuque, Cedar Rapids, Ottumwa, Keokuk, and Sioux City; area, 56,025 sq. miles; pop. (1900), 2,231,853; nicknamed the Hawkeye State.

"Iowa," The.—One of the U. S. battleships that destroyed the Spanish fleet at Santiago, July 3, 1898. Admiral Cervera, the Spanish commander, when his flagship the "Maria Teresa," went down, was rescued from the water and taken on board the "Iowa," where he was received by her commanding officer, Captain Robley D. Evans.

Ipecacuanha.—The dried root of *Cephaelis Ipecacuanha*, a small shrubby plant, a native of Brazil, the United States of Colombia, and other parts of South America. There are three varieties, the brown, red, and gray—differences due to nothing more than age, place of growth, or

method of drying. It is emetic, purgative, diaphoretic, and is much used in medicine. It is in the bark of the root that the active principle (emetine) lies, and in good specimens it amounts to 14 or 16 per cent.

Iphigenia, in Greek mythology the daughter of Agamemnon and Clytemnestra, whose story has been dramatized by Euripides, as well as by Racine and by Goethe. The story, as related in one legend, is that Agamemnon, as he was about to sail against Troy, killed a favorite deer belonging to Artemis in Aulis, and this so offended that goddess that when the seer Calchas was consulted, on the matter of propitiating her, he told Agamemnon that the only means of doing so was to sacrifice his daughter Iphigenia. This Agamemnon proceeded to do, but meanwhile Artemis carried Iphigenia away in a cloud to Tauris and made her a priestess in her temple. While at Tauris, Iphigenia saved her brother Orestes from being put to death, he having come hither with the design of carrying off the image of Artemis or Diana.

Ipswich.—(1) In England, the capital of Suffolk. The birthplace of Wolsey. (2) A port of Queensland, Australia. (3) A river port in Essex County, Mass.

Irawadi or **Irrawaddy.**—The principal river of Burma; length about 1,500 miles; it flows into the Bay of Bengal.

Iredell, James.—(1751-1799.) He was justice of the U. S. Supreme Court (1790-99).

Ireland.—An island forming part of the United Kingdom of Great Britain. In the north and west it is washed by the Atlantic Ocean, on the south by St. George's Channel, and on the east by the Irish Sea. The island is divided into four provinces—Leinster, Munster, Ulster, and Connaught. In Ulster, the northern province, manufacture is conducted on a large scale, while in the three remaining provinces the population is dependent on agriculture. In religion, Ulster is Protestant, while Leinster, Munster, and Connaught, are Roman Catholic. Pop. (1901) 4,456,546.

Ireland, John.—Born in Ireland, 1838. A Hiberno-American Roman Catholic prelate. He emigrated to America in 1849 and was ordained bishop of St. Paul in 1884 and archbishop in 1888.

Iris, The.—2907.

Irish Fairy Tales.—1331.

Irish Moss.—See ALGÆ, 2940.

Irish Sea.—A body of water lying between England and Ireland; it is connected with the Atlantic Ocean by the North Channel on the north and by St. George's Channel on the south.

Irish Setter.—2411.

Iron.—2945.

IRON AND STEEL.—

The extraction of iron from the substances in which it is found in nature is by no means a recent achievement; but the methods now employed for that purpose, and the scale on which iron manufactures are now carried on, are very

Iron and Steel.—*Continued*

different from what they were in the past. Then iron played only a small part in the daily life of mankind, whereas now it is used more than all the other metals together. Some one has said that the chief difference between the present age and the ones that preceded it lies in the wider use that is now made of iron.

As found in nature iron is always in combination with some other substance, generally oxygen. The compounds that it forms with oxygen are quite numerous, and they make up the bulk of the valuable iron ores. The word ore means the natural form in which the mineral occurs.

In principle, the extraction of iron from its ores is a very simple matter; all that is necessary is to heat the ore strongly in the presence of some form of carbon. The oxygen in the ore combines with the carbon to form carbon monoxide, and the iron is set free. The change may be represented thus:—

Iron oxide + carbon = iron + carbon monoxide.

This is not an exact statement of what takes place, however, for the iron produced is not pure. It always has mixed with it a certain quantity of carbon, and the properties of the resulting iron are largely dependent upon the proportion of carbon present. Iron is divided into the following three classes, according to the amount of carbon contained in it:—

Pig, or cast iron, containing from four to five per cent. of carbon.

Steel, which contains less carbon than pig iron, but more than the wrought.

Wrought iron, containing about one-half per cent. of carbon.

Pig iron is easily melted and can be cast, but it cannot be worked in the forge; steel can be cast, and can also be worked in the forge, and the articles made from it can be tempered; wrought iron cannot be cast, but can be worked in the forge, though articles made from it cannot be tempered afterward.

The first form of iron produced was wrought iron. This is the only kind that can be produced without a very hot furnace, because iron does not take up much carbon except at very high temperatures. The early iron workers had no way of making very hot fires, but they had learned that when air was forced up through a fire more heat was produced than when it burned on the ground, and their forges were built with some form of bellows that could be used for this purpose. This gave sufficient heat to extract iron from some of its ores, but others could not be successfully treated in an open forge, because the fire was not hot enough. To remedy this defect chimneys were built around the forges, and the heat that had been wasted on the surrounding air was kept in the forge. The stones in the chimney took up the heat, and became so hot that the refractory ores were reduced and the iron liberated. The temperature of the furnace was also made high enough to make the iron take

up four or five per cent. of carbon and then to melt, thus forming pig iron.

At the present day the first stage in the manufacture of any kind of iron is to make pig iron. This is done in enormous furnaces, and the process is called smelting. Before attempting to understand this process you should learn something about the furnaces in which it is carried on.

They are tall structures of brick or iron that look like very broad chimneys. At the bottom there are generally two or more doors, and there is a track running to the top, for carrying the iron ore, the fuel, and the other substances used in the smelting process. Large pipes enter the bottom, to carry the air that is forced up through the fire in the furnace to produce greater heat. These pipes are known as *tuyers*, and the air forced through them is called the *blast*, from which we get the name *blast furnace*, which is applied to furnaces of this kind.

When one of these furnaces is to be put in operation it is "charged" with successive layers of fuel, ore, and a mixture formed of such substances as lime, clay, and sand, about which you will learn more presently. The fire is then started, and the blast is turned on, and it is kept going day and night until the furnace is "burned out." As the mass in the furnace settles downward more fuel, ore, etc., are added, and the smelted iron drawn off at the bottom. The furnace is not allowed to go out, because the cooling would cause its fire-brick lining to crack, and one of these linings can be replaced only at considerable expense.

Let us now turn our attention to the process that goes on in the furnace. When the heat becomes sufficiently great, the iron oxide is decomposed by the carbon of the fuel and the iron is set free and sinks toward the bottom of the furnace. As it goes downward, it keeps getting hotter, until it takes up enough carbon to cause it to melt; but after that has happened the iron has to pass the point where air is blown into the furnace, and there it would be burned to iron oxide again were it not for the mixture of sand, lime, clay, etc., that was put in with the ore and fuel. These substances melt and form what is called *slag*, a kind of glass, which covers the particles of molten iron, and protects them from the effects of the air blast. Lower down in the furnace the heavy iron separates from the lighter slag, and settles to the bottom, leaving the slag floating on the surface. This permits the iron and slag to be drawn off separately, through different doors.

When the iron comes from the furnace it is so hot that it is a liquid almost as thin as water. This causes it to flow very easily along grooves that are formed in sand to receive it. It hardens in these grooves, forming heavy solid blocks called *pigs*. The central groove from which the smaller ones branch off, is called the *sove*.

The iron produced in this way is very hard, brittle, and easily melted. These properties

Iron and Steel.—*Continued*

make it unsuitable for use where it would receive heavy blows, but it can be readily cast into various forms, and is, therefore, used for making stoves, grates, and many other articles of hardware.

Since the difference between pig iron and the other forms of iron is that the former contains a larger percentage of carbon, it is evident that if a portion of the carbon were burned away steel would first be formed, and then wrought iron. It is almost impossible to burn away just enough carbon to leave steel, however, so, in converting pig iron into the other forms, it is first changed into wrought iron, by burning away nearly all the carbon, and then converted into steel by causing it to take up just enough carbon for the purpose.

Cast iron is converted into wrought iron by a process called *puddling*. This consists in heating the cast iron in what is called a *reverberatory furnace*, the peculiarity of which is that in it the flame from the fire comes into direct contact with the iron. In puddling, the carbon of the cast iron is burned out, and wrought iron is left. During this process the iron is raked back and forth (puddled) over the hearth of the furnace in order to bring all of it into contact with the flames, and when this has been done long enough the iron is formed into lumps or balls, which are then hammered or squeezed to get rid of any slag that may have become mixed with the iron.

Great heat is required to melt iron produced in this way, but it becomes soft and pasty when heated sufficiently, and while in this condition can easily be hammered into different forms. It is because this iron can be worked in this way that it is called *wrought iron*. It is not hard and brittle, like cast iron, but is tough and malleable. It is easily bent, but is very hard to break. Another important property of wrought iron is, that it welds or unites, when two pieces of it are heated until they become pasty, and are then hammered together.

Steel was formerly made almost entirely by packing bars of wrought iron in an iron box with charcoal and heating them intensely for a week or ten days. By this method, which is called the *cementation process*, the iron bars were caused to take up a certain amount of carbon and thus become changed into steel. On account of the peculiar blistered appearance of the bars after this process the steel made by it is called *blistered steel*.

The cementation process is still employed to some extent in steel making, but it is very slow, and has been largely replaced by what is known as the *Bessemer process*. By the Bessemer process, which is named after its inventor, steel is made in from twenty to thirty minutes, instead of a week or ten days, as in the cementation process. Molten cast iron is poured into an egg-shaped vessel of boiler iron, lined with fire-brick, which is called a *converter*. Air is forced up through the molten iron from the

bottom of the converter, and after twenty or thirty minutes the carbon is entirely burned out. If the contents of the converter were now poured out they would be practically useless, but at this point enough pig iron is thrown into the converter to supply the mixture with just enough carbon to convert it into steel.

The pig iron added to the contents of the converter is generally of the kind known as *spiegel eisen* (sparkling iron), which contains a small amount of an element something like iron, and known as *manganese*. This element is thought to produce a desirable effect upon the steel.

Steel has thus far been spoken of as lying between the two other varieties of iron, and as differing from them only in the amount of carbon contained in it. This is not exactly true, for steel has been made that contained as much carbon as some cast iron; and, on the other hand, it sometimes contains as little as wrought iron. There is a hidden difference between steel and the other forms of iron, which is not fully understood, and which seems to be independent of the amount of carbon present. This difference is said to be one of structure. The particles of steel are thought to be held together in a different way from those in cast and wrought iron.

The most characteristic property of steel, perhaps, is its capacity to receive temper. When steel is heated quite hot, and is then cooled suddenly, it is hardened and made more elastic; this is called *tempering*, and the increase in hardness and elasticity produced in this way is called *temper*.

Besides the methods that have been described for the manufacture of iron and steel, there are many others that have been devised especially for certain kinds of ore, or with a view to the production of iron or steel having special properties. The processes already explained are of more general interest, however, and will enable you to understand the others as you will find them described in books devoted especially to this subject.

Iron City, The.—A name applied to Pittsburg, Pa., because of its iron manufactures.

Iron Cross.—Prussian order of knighthood instituted March 10, 1813, by Frederick William III. It is conferred for distinguished services in war and is made of iron with silver mountings.

Iron Mountain.—An eminence situated in eastern Mo., 1,075 ft. high, noted for its deposits of iron ore.

Ironton.—A city in Ohio, situated on the Ohio River, the center of an iron district. Pop. (1900), 11,868.

Iroquois Indians.—One of the great families of American aborigines, composed of many tribes speaking languages of a common origin. In early days most of the Iroquois dwelt in the region of the Great Lakes, in what are now the Canadian provinces of Ontario and Quebec, and the states of N. Y. and Pa. A small group, the Tuscaroras, occupied the region about the

head waters of the Roanoke and Neuse rivers, and the branches of Cape Fear River, in N. C. and Va. Intellectually and physically they were the foremost of American Indians. They were almost constantly at war with neighboring tribes or with the whites, and in the struggle for American independence they sided with Great Britain. They now have reservations in the Dominion of Canada.

Irresponsiveness as a Childish Fault.—906.

Irreverence as a Childish Fault.—924.

Irrigation.—The artificial watering of arid land. It has been practised in Egypt and the East from remote ages, and large areas of formerly useless land in the U. S. have been by this means reclaimed and rendered tillable and productive, notably in Cal., Col., Utah, Wyo., Nev., Ida., Mont., Ariz., and N. Mex. Much of this has been done by the states, and aid has been given by the Federal Government.

Irving, Sir Henry.—The adopted or stage name of John Henry Brodribb, a British actor who has long been associated with Miss Ellen Terry in the histrionic art. Sir Henry was born in 1838, and has now been on the stage for about 45 years, and since 1871 has been connected with the Lyceum Theatre, London. His earliest successes were as "Mathias," in "The Bells," and later in the personations of Louis XI., Charles I., Hamlet, Macbeth, Richard III., Wolsey in Henry VIII.—his character delineation of whom has manifested the highest qualities of the actor's art. He has also achieved successes in the following plays: "Faust," "The Corsican Brothers," "The Lyons Mail," in Tennyson's "Becket," "Othello," "Merchant of Venice," and in "Richelieu." Irving was knighted in 1895. He has published several addresses on the drama, and on acting.

Irving, Washington.—Author; sketch of, 311.

Ischia.—An island in the Bay of Naples, a few miles from the city of Naples, to which it belongs. Although volcanic in formation the island is extremely fertile; it is noted for its warm baths.

Isult.—See TRISTRAM, 1784.

Ishpeming.—A city in Michigan, noted for its iron industry. Pop. (1900), 13,255.

Isis.—See HES, 1590.

Island No. 10 (Tenn.), Capture of.—A notable Union victory, early in the Civil War. After the fall of Fort Donelson (Feb., 1862) the Confederates took position on Island No. 10, in the Mississippi River, 80 miles below Cairo. They fortified the island in the strongest possible manner. A Federal land force under Gen. Pope, with a coöperating naval squadron commanded by Commodore Foote, succeeded, with very little fighting, in compelling the surrender of the island April 7, with all of its garrison, armament, etc. The captures were three generals, 273 other officers, 6,700 men, 123 heavy guns, 35 field pieces, 7,000 small arms, and an immense quantity of ammunition, equipage, and stores. This opened the Mississippi River, and the capture of Memphis by the Federals soon followed.

Isles of Shoals.—A group of small islands off the coast of N. H., much frequented as summer resorts.

Isocrates.—(436-338 B.C.)—One of the ten Attic orators.

Israels, Josef.—Born, 1824; a noted figure painter of the Belgian school.

Italian Fairy Tales.—1253.

Italy.—A kingdom of southern Europe, lying to the south of Switzerland and the Tyrol, and extending as a boot-shaped peninsula into the Mediterranean Sea, west of the Adriatic. With Sicily and Sardinia, it has a total area of 110,646 square miles, with a population of 32 millions. In the king (Victor Emmanuel III., born 1869 and succeeded Humbert I.) is vested executive power under the direction of his ministers. The legislative power is vested in the king and Parliament, comprising a Senate Chamber of Deputies. The Roman Catholic Church is the dominant one, but its power is now in many ways subordinate to the civil authority, since the suppression of the Pope's temporal dominion. Rome is the capital of United Italy (pop. 512,423), but Naples (pop., 544,057) is now the largest city. Milan, Turin, Palermo, Genoa, and Florence rank next in order. Italy has foreign dependencies in northeastern Africa, and on the coast of the Red Sea (the colony of Eritrea). The financial and economic condition of Italy is sound, while it has a small army and a considerable navy, with a large mercantile marine. Its exports consist of silk, wine, olive oil, hemp, and flax, meats and hides, rice, eggs, sulphur, dyeing and tanning stuffs, together with marble, zinc, iron, copper, and tin ores. She has a total railway mileage of 10,000 miles. Education is compulsory for children between six and nine, and there are a number of notable universities. There is considerable emigration annually from Italy.

Italy, Victor Emmanuel III., King of.—Born 1869, only son of King Humbert I., who was assassinated at Monzo, Italy, July 29, 1900, by an Italian anarchist known at Paterson, N. J., as Gaetano Bresci. The present king succeeded to the Italian throne on the death of his father, and in 1896 married Hélène, a daughter of Nicholas, Prince of Montenegro. He is known to his countrymen both as a soldier and a sailor, and has always taken a keen interest in Italy. His mother was the Princess Marguerite of Savoy, born in 1851 and married in 1868 Humbert, Prince of Piedmont (afterward [1878] king of Italy).

Itasca, Lake.—A small lake in Minn.; the source of the Mississippi; about 1,457 ft. above sea-level.

Ithaca.—A city in N. Y., the seat of Cornell University. Pop. (1900), 13,136.

Ithaca.—Off the west coast of Greece, one of the Ionian Islands; noted as the reputed home of Ulysses.

Iuka (Miss.), Battle of.—Iuka is situated in northeastern Mississippi, 25 miles east of Corinth. Here was fought, Sept. 19 and 20, 1862, a severe battle between a large Confederate force under Gen. Earl Van Dorn and two Union divisions

- commanded by Gen. Rosecrans. The Confederates were defeated with a loss of 1,600 in killed and wounded; the Union loss was 650. Van Dorn secured reinforcements and a few days later made a desperate but unsuccessful attack on Corinth (which see). A feature of the fighting at Iuka was the superb gallantry of the 11th Ohio battery, the men of which stood by their guns throughout, although nearly 60 per cent. of their number were killed or wounded.
- Ivan.**—The Russian form of John; the name of several Russian czars. Ivan III. (1438-1505) was the founder of the Russian empire; at first only Duke of Moscow, but succeeded in driving the Tartars out of Russia, and subjecting a number of Russian principalities to his own sway. Through his marriage European civilization entered Russia. Ivan IV. (1529-84) did much for the advancement of Russia in art and commerce and greatly extended its boundaries by force of arms. He was also surnamed "the cruel," and merited it by his deeds, among which was the slaughter of 60,000 persons at Novgorod in six weeks because of a plot to deliver up the city and surrounding territory to the king of Poland.
- "**Ivanhoe.**"—A novel by Sir Walter Scott, published in 1820.
- Ivory.**—The hard substance, not unlike bone, of which the teeth of most mammals chiefly consist, the dentine or tooth-substance which in transverse sections shows lines of different color running in circular arcs. It is used extensively for industrial purposes and is derived from the elephant, walrus, hippopotamus, narwhal, and some other animals. The ivory of the tusks of the African elephant is held in the highest estimation by manufacturers; the tusks vary in size, ranging from a few ounces in weight to 170 pounds. Holtzapffel states that he saw fossil tusks on the banks of rivers of northern Siberia which weighed 186 pounds each. Ivory is simply tooth-substance of exceptional hardness, toughness, and elasticity, due to the firmness and regularity of the dentinal tubules which radiate from the axial pulp-cavity to the periphery of the tooth.
- Ivory Coast.**—A part of the coast of Upper Guinea, Africa. A possession of France.
- Ivy, The Poison.**—2921.
- Ixion.**—According to Greek mythology, a king of the Lapithæ, and father of the Centaurs. For certain offenses he was punished in the lower regions, by being bound to a wheel destined to revolve forever.

J

- Jack.**—A small flag having only the union, without the fly, and is usually hoisted at the bowsprit cap.
- Jackdaw.**—2536.
- Jack-in-the-Pulpit, The.**—2894.
- Jackson.**—(1) A city in Mich., situated on the Grand River, noted for its flourishing manufactures and trade. Pop. (1900), 25,180. (2) The capital city of Miss., on the Pearl River. A cotton emporium. The scene of a battle in the Civil War, in which the Confederates suffered defeat from the Federals commanded by Gen. Grant (1863). Pop. (1900), 7,816. (3) A city in Tenn. situated on the Forked Deer River. Its great export is cotton. Pop. (1900), 14,511.
- Jackson, Andrew.**—Seventh President; sketch of, 314.
- Jackson (Miss.), Capture of.**—During the operations of Gen. Grant preliminary to the siege of Vicksburg, the corps of Sherman and McPherson were sent to Jackson, the capital of Miss. Near the city they met and defeated a Confederate force under Gen. J. E. Johnston. The latter was driven through Jackson, losing 800 men, and the city was occupied by the Federals. All the Confederate depots of supplies were destroyed and the Federals then marched to rejoin the army of Grant.
- Jackson, Charles Thomas.**—Born at Plymouth, Mass., 1805; died at Somerville, Mass., 1880. A noted geologist and physician. He was appointed state geologist of Me. in 1836, and of R. I. in 1839, and state surveyor of mineral lands of Mich. in 1847. He constructed in 1834 a telegraphic apparatus similar to that patented by Morse, and in 1852 received a prize from the French Academy for the discovery of etherization.
- Jackson, Henry R.**—Born in Ga., 1820. He was minister to Austria (1854); served in the Civil War as a brig.-gen. in the Confederate army; in 1875 was elected president of the Ga. Historical Society.
- Jackson, James S.**—Born in Ky.; killed at the battle of Perryville, Ky., Sept. 8, 1862. He entered the Union army in 1861, as colonel of the 3d Ky. cavalry, and in 1862 was promoted to brig.-gen.; he fell at the head of his brigade, as above.
- Jackson, Mrs. (HELEN MARIA FISKE, later MRS. HUNT; Pseudonym H. H.).**—(1831-1885.) A noted poet, novelist, and writer of miscellaneous works. She was special commissioner in 1883 to examine into the condition of the Mission Indians of Cal.
- Jackson, Thomas Jonathan ("Stonewall").**—Soldier; sketch of, 319.
- Jacksonville.**—(1) A city in Fla., on St. John's River, noted as a railway, steamboat, and commercial center. Its chief exports are grain and fruit. It is also much frequented as a winter health-resort. Pop. (1900), 28,429. (2) A city in Ill., the seat of Ill. College and other educational and charitable institutions. Pop. (1900), 15,078.
- Jacob.**—1450.
- Jacobi, Abraham.**—Born in Westphalia, 1830. A German-American physician. He came to the

U. S. in 1853 and was appointed professor of diseases of children in the New York Medical College in 1861, in the medical department of the University of New York (1867), and in the College of Physicians and Surgeons (1870).

Jacobi, Mary Putnam.—A physician of New York. She was the first female graduate of the New York College of Pharmacy. She has been professor of *materia medica* in the Female Medical College, New York, since 1877. She was born in London, 1842.

Jacobins, The, were members of a political club organized during the French Revolution, of which Robespierre was the dominant leader. The club received its name from the Church of St. Jacques (Jacobus), Paris, in which it held its earliest meetings. It was originally composed of moderate men of the type of Talleyrand, Mirabeau, La Fayette, and others, but in the delirium of the time they withdrew, and Robespierre became its chief, under whom the Jacobins for a time dictated every government measure. With Robespierre's downfall, in 1794, the club was suppressed, though not until it had committed many revolutionary acts of the wildest character, for terror was the Jacobin's weapon, and their opponents, the Girondists, were powerless to intervene.

Under the National Government the public credit fell to a low ebb, and the currency became debased. In our Revolutionary times, there were naturally great disturbances of commerce and a bad condition of the finances. To seek to mend this state of things a disastrous recourse was had to the issue of paper money, and hence the clamorers for this "cheap money," which brought into vogue the term "not worth a continental," were at the era likened to the French Jacobins, who desired to make bad money pay for good.

Jacotot, Jean Joseph.—(1770-1840.) A French soldier, a mathematician, French lecturer on literature at Louvain and director of the Military Normal School. He was the inventor of the "Universal Method" of education.

Jacques, Bonhomme.—A national name for the French peasantry.

Jade.—2350.

Jaffa, or Joppa.—A town on the seacoast of Syria, at the head of the Mediterranean Sea, 33 miles from Jerusalem. Pop., 17,500.

Jaguar, The.—2462.

Jainas.—A sect of Hindus, forming on account of their wealth and influence an important division of the people of India. They number nearly 400,000. They are the followers of Jina the Victorious.

Jamaica.—A British island of the Greater Antilles, West Indies, 90 miles south of Cuba, in the Caribbean Sea. Capital, Kingston. It is 144 miles long and 50 miles in extreme width. Pop. about 750,000, of which 500,000 are blacks and only 20,000 whites. The remainder are colored and coolies.

Jamaica Bay.—An inlet of the Atlantic, south of Long Island, N. Y.

James.—A river in Va., flowing into Chesapeake Bay, near Old Point Comfort. It was an important strategic point in the Civil War.

James I.—(1394-1437.) King of Scotland (1406-37).

James II.—(1430-1460.) King of Scotland (1437-60).

James III.—(1451-1488.) King of Scotland (1460-88).

James IV.—(1473-1513.) King of Scotland (1488-1513).

James V.—(1512-1542.) King of Scotland (1513-42).

James I.—(1566-1625.) King of England, Scotland, and Ireland (1603-25).

James II.—(1633-1701.) King of England, Scotland and Ireland (1685-88).

James, Army of the.—One of the grand divisions of the U. S. army during the Civil War. It was organized early in 1864, and was chiefly composed of the 10th and 18th corps. It was auxiliary to the Army of the Potomac, and operated with it during the last year of the war. It was first commanded by Gen. Benjamin F. Butler, and afterward by Gen. Edwin O. C. Ord.

James, Edmund Storer.—Born at Sheffield, Mass., 1807; died at New York, 1876. He was bishop of the Methodist Episcopal church in America.

James, George Payne Rainsford.—(1801-1860.) An English historical writer and novelist.

James, Henry.—Born at New York, 1843. A noted novelist, son of Henry James. His principal works include "Transatlantic Sketches," "A Passionate Pilgrim," "The American," "The European," "Daisy Miller," "Confidence," "Portrait of a Lady," "The Bostonians," "The Real Thing," etc.

Jameson, Leander Starr, M.D., or Doctor "Jim," was a medical practitioner at Kimberley, capital of Griqualand West, Cape Colony, who as administrator of the British South Africa Company, made an attack upon Matabeleland in 1893. In 1895 he made an unsuccessful attack on Johannesburg. He was sent by President Krüger to England for trial, where he was sentenced to 15 months' imprisonment, but was released in Dec., 1895, on account of ill health.

Jameson, Mrs. (ANNA BROWNELL MURPHY).—(1794-1860.) A British author and writer on historical and art subjects.

Jamestown.—(1) Situated in Va., on the James River, and was the first permanent English settlement in the U. S. in 1607. It was burned in Bacon's Rebellion in 1676. The only relics of it now are the tower of the church and a few tombs. (2) A city in N. Y., noted as a summer resort. Pop. (1900), 22,892.

Jamestown (Va.), Battle of.—Early in 1781, Washington ordered LaFayette, with 1,200 light infantry, to undertake the capture of Benedict Arnold, who after his treason to his country had been sent by Clinton, with 1,600 men, to devastate the country along the James River and destroy the stores at Richmond. LaFayette reached Richmond Apr. 29, just as the tobacco warehouses at Manchester, across the river, were being destroyed by Gen. Phillips, who had meanwhile succeeded Arnold. Cornwallis about this time abandoned his unprofitable campaign in the Carolinas, and entered Va. with 8,000 men.

La Fayette realized that it would be impossible to hold Richmond against this large force and turned northward to the Rappahannock, where he was joined by Gen. Wayne with 800 Continentals. Returning, La Fayette was further reinforced by Steuben. With his army thus augmented to 4,000 men, he pursued Cornwallis toward Richmond, which place the latter evacuated June 20, retiring toward Jamestown. La Fayette attacked Cornwallis July 6, near Green Springs, a few miles from Jamestown. A feature of the battle was the personal bravery displayed by Gen. La Fayette, but he was forced to retire to Malvern Hill. The American loss was 118, killed, wounded, and missing; the British lost 75.

Jami (*ja-mé'*).—(1411-1492.) A celebrated Persian poet.

Janesville.—A city in Wis., situated on the Rock River. Pop. (1900), 13,185.

Janiculum.—The highest of the "seven hills of Rome" is situated on the right bank of the Tiber, opposite to the Capitoline and the Aventine. It is 276 feet above the sea.

Janouschek (*yá'nou-shek*), **Fanny.**—A Bohemian tragic actress, was born at Prague in 1830. She has appeared in all the European centers and has made several professional visits to America.

Jansenists.—A school of Roman Catholic followers of Cornelis Jansen (1585-1638) a Dutch Roman Catholic theologian.

January.—The first month of the year, was held sacred to the Roman god Janus. This month and February were added to the calendar by Numa.

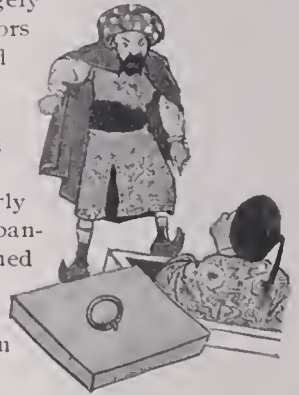
Janus.—See GREEK AND ROMAN MYTHOLOGY, 1622.

Japan.—Sometimes called Nippon, "Land of the Rising Sun," an Asiatic empire in the Northern Pacific, adjacent to China, from which it is separated by the Sea of Japan and the straits of Korea. It embraces five large islands, Honshiu (the mainland, on which is the capital Tokio or Yedo), Yezo, to the north of the latter, Shikoku and Kiushiu, to the south of it, together with a number of smaller islands. Formosa (Taiwan) and Hokoto (the Pescadores) were ceded in 1895 by China, in accordance with the treaty of Shimonoseki. The area of the empire (without Formosa, 13,458 sq. miles, and the Pescadores, 86 sq. miles) is 147,655 square miles, with an estimated population of 44



millions. The population of Formosa is 2,745,138, and that of the Pescadores, 52,405. The capital Tokio or Tokyo had a population in 1898 of 1,440,121. Osaka is the next largest city, with a population of 821,235. The two chief religions are Shintoism and Buddhism, besides numerous Roman Catholics, adherents of the Greek Church, and Protestants. There is no state religion and no state support. Prior to 1889 the country was an absolute monarchy, but

in that year a new constitution was promulgated. In the emperor or mikado (Mutsu Hito, born 1852, succeeded to the throne 1867) are vested the executive power with the advice of his ministers, and the legislative power with the consent of the diet. The latter is composed of a House of Peers and a House of Representatives. The land is held largely by peasant proprietors and produces rice and cereals, tea, sugar, and silk. Coal is also abundant, and there are also deposits of sulphur. Early in 1902 an Anglo-Japanese alliance was formed to protect the common interests of Japan and Great Britain in the Far East.



JAPANESE FAIRY TALES

Japanese Fairy Tales.—1220.

Japanese Maple, The.—2812.

Japanese Persimmon.—2883.

Jason.—See GREEK AND ROMAN MYTHOLOGY, 1626.

Java.—An island of the Asiatic Archipelago, the chief seat of Dutch power in the East Indies. Capital, Batavia (pop., 116,000); the other large towns are Samarang and Soerabaya. The area of Java, with Madura, is 50,554 sq. miles, with an estimated population of 26,125,053. Its exports are coffee, tea, sugar, rice, indigo, pepper, and tobacco. The prevailing religions are Roman Catholicism and that of the Reformed Dutch Church. Besides the natives and the Dutch, Java contains a number of Chinese, Arabs, and various Orientals.

Jayhawkers.—At the beginning of the Civil War, bands of marauders carried on a guerrilla warfare in eastern Kansas. They were called Jayhawkers from the similarity of their methods to those of the bird of that name.

Jay, John.—Born at New York 1745; died at Bedford, N. Y., 1829. A distinguished statesman and jurist. He became delegate to Congress from N. Y. (1774-77 and 1778-79), and was the framer of the N. Y. constitution of 1777. He was appointed U. S. minister to Spain (1780-82), peace commissioner at Paris (1782-83), secretary of foreign affairs (1784-89). He was a contributor to the "Federalist," first chief-justice of the U. S. Supreme Court (1789-95); unsuccessful candidate for governor of N. Y. (1792); special minister to Great Britain (1794-95), and governor of N. Y. (1795-1801).

Jay Treaty.—The name given to a treaty of peace and friendship which was negotiated in 1794 by John Jay representing the U. S. and Lord Grenville for Great Britain. It provided for the evacuation of the British posts in the U. S., free commercial intercourse on the American continent, unrestricted navigation of the Mississippi River, indemnity to citizens of each country for damages at the hands of privateers of the other, and a limited trade between this country and the

British West Indies. This last clause caused the treaty to be very unpopular in America.

Jealousy as a Childish Fault.—901.

"Jeannette" Polar Expedition.—July 8, 1879, an Arctic expedition, sent out by James Gordon Bennett, proprietor of the "New York Herald," left San Francisco in the steamer "Jeannette" under command of Lieut. De Long, U. S. N. The vessel was early caught in the ice-pack and drifted for nearly two years without escaping from its grip. June 11, 1881, she was crushed by the ice and sank. The crew took to their boats, two of which reached the coast of Siberia. The crew in one of these succeeded in reaching Irkutsk in safety, after much hardship. Two sailors from the other boat made their way to Bulcour and sought succor for De Long and his companions. A searching party started out, but failed to reach them. Their bodies were finally discovered, brought to New York by special steamer, and given a public funeral, Feb. 22, 1884. The third boat and its occupants were never heard of again.

Jebb, Richard Claverhouse.—Born 1841. An eminent British scholar, and regius professor of Greek at Cambridge, England. He has represented his university in the House of Commons during several sessions.

Jedburgh.—The capital of Roxburghshire, Scotland, noted for the remains of an abbey which was founded in 1118 by David I. Pop., about 3,500.

Jefferson, Joseph.—Born at Philadelphia, 1829. A noted actor. He first became prominent in the character of Asa Trenchard in "Our American Cousin." His principal character was that of Rip Van Winkle. He published an autobiography in 1890.

Jefferson, Mount.—(1) One of the principal summits of the White Mountains in N. H., near Mount Washington. Height, 5,725 ft. (2) A peak in the Cascade Mountains, Ore. Height, 10,200 ft.

Jefferson, Thomas.—Third President; sketch of, 330.

Jeffersonville.—A city in Ind., on the Ohio River at its falls, opposite Louisville, Ky. Pop. (1900), 10,774.

Jeffreys, George, Baron Jeffreys.—(1648-1689.) An English judge who became notorious on account of his cruelty while presiding over the Bloody Assizes in support of James II. He died in the Tower of London.

Jelly-fish, The.—See RADIATES, 2711.

Jena.—(*yā'nā*).—A city in Germany, on the Saale, 45 miles from Leipsic. It is famous for the battle fought here between the forces of Napoleon and the combined forces of Prussia and Saxony, in which Napoleon was victorious (1806). It has also an old and celebrated university. Pop. 13,500.

Jenghiz or Genghis Khan.—(1162-1227.) Jenghiz Khan, the Mongol emperor, and one of the greatest conquerors that the world has ever seen, was born in a tent on the banks of the river Anon in 1162, while his father was engaged in a successful war against the Tartars. At the age of thirteen, he succeeded his father on the Mongol throne, as the chief of a petty Mongolian

tribe. He began his reign under depressing conditions. Several tribes, whom the father had held under his allegiance only by the exercise of an iron rule, seceded from the son. The mother seized the national banner and succeeded in bringing back about one-half of the deserters, but it was difficult to remain at peace with the others.

Jenghiz held his ground against the plots and hostilities of the neighboring tribes, and soon won a widespread reputation for courage, generosity, and virtue. He was engaged in almost unceasing warfare with them until 1206, when, having a firm grasp of power, he called an assembly of the great men, and by their request adopted the name by which he has since been known. He proclaimed himself the ruler of an empire. He soon extended his empire, by shattering the forces of his last remaining enemy on the Mongolian steppes. Then he turned toward the Kirg Tatars who had wrested northern China from the Sung dynasty. He invaded western Hea and captured several strongholds. After overthrowing the Khaus of Merkit and Naiman, on the river Irtysh, he defeated the Kin army, captured a pass in the Great Wall, and victoriously established his sway over new cities and provinces north of the Yellow River.

He soon had occasion to turn his attention to Muhammed, the shah of Khwarezm, who had recently aided the hostile Naiman chief in extending his power. Desiring friendly relations with the Shah, he sent envoys with presents and the following messages: "I send thee greeting; I know thy power and the vast extent of thine empire; I regard thee as my most cherished son. On my part thou must know that I have conquered China and all the Turkish nations north of it; thou knowest that my country is a magazine of warriors, a mine of silver, and that I have no need of other lands. I take it that we have an equal interest in encouraging trade between our subjects." He received a favorable reply, but by a later event he was forced to declare war. The governor of Atrar having seized some Mongol traders and executed them as spies, he sent envoys to demand that the governor be sent to him for judgment. When Muhammed beheaded one of his envoys and sent the others back without their beards, Jenghiz decided upon war to avenge the insult.

In 1219 he started from Karakoram with two armies, one of which completely routed Muhammed's army of 400,000 men, killing 160,000 of them, and the other took Atrar and leveled its walls to the ground. With another army, he captured Bokhara, plundered it, and, while men, women, and children were weeping, set it on fire, and left it in ruins. He then advanced to Samarkand which surrendered and was pillaged. Merv and Nishapoor were also taken, and Herat surrendered without resistance. In a desperate battle, Jenghiz routed the Turks on the banks of the Indus. After turning to strike a blow of bloody vengeance against Herat,

which had revolted, he returned to Mongolia, and soon took the field in western China, where he died in 1227.

He had sent an army which invaded Georgia, took Astrakhan, and followed the opposing forces to the Don. On the river Kaleza, it routed the Russians, who had barbarously killed Mongol envoys which had been sent to the Russian camp at the Dneiper. After ravaging Bulgaria, the invading army returned toward Mongolia.

Thus Jenghiz lived to see his armies victorious from the China Sea to the banks of the Dneiper. The tribes of Turkestan, the Persians, the Turks, and the Greeks had fallen victims to his devastating advance. His authority extended over a wider reach of territory than Persian or Roman had ever ruled. It was his vigorous expansion policy and vigorous rule which drove the ancestors of the Turks from their original home in northern Asia, and finally resulted in their advance into Bithynia and Europe.

What he acquired with such restless ambition and ceaseless energy was held together for a time under his strong successor; but his vast empire finally crumbled away, and the clatter of the hoofs of Mongol horses ceased to be heard on the borders of Asia and Europe.

A short time before his death, Jenghiz called his officers about him and said: "My time has come. Last winter when the Five Planets appeared together in one quarter was it not to warn me that slaughter should be ended, and I neglected to take notice of the warning. Now let it be proclaimed abroad, wherever our banners wave, that it is my earnest desire that henceforth the lives of our enemies shall not be unnecessarily sacrificed."

Jenkins, Thornton Alexander.—(1811-1893.) He was chief staff officer of Farragut's squadron in the Mississippi River during the Civil War and became rear-admiral in 1870.

Jenner, Edward.—(1749-1823.) An English physician and the discoverer of vaccination. On May 14, 1796, he first performed the operation with entire success. In recognition, Parliament made him a grant of £10,000.

Jerrold, Douglas William.—(1803-1857.) An English humorist, satirist, and dramatist. He is the author of "Mrs. Caudle's Curtain Lectures."

Jersey.—The largest of the Channel Islands. It is 10 miles long and from 5 to 6 miles wide. The population (1901) was 52,796; the capital is St. Helier.

Jersey City.—A city in N. J. situated on the Hudson River opposite New York. Formerly it was called Paulus Hook, but in 1820 was incorporated as the City of Jersey, and as Jersey City in 1838. Tobacco is one of its most important manufactures. It is the terminus of several railway and steamship lines. Pop. (1900), 206,433.

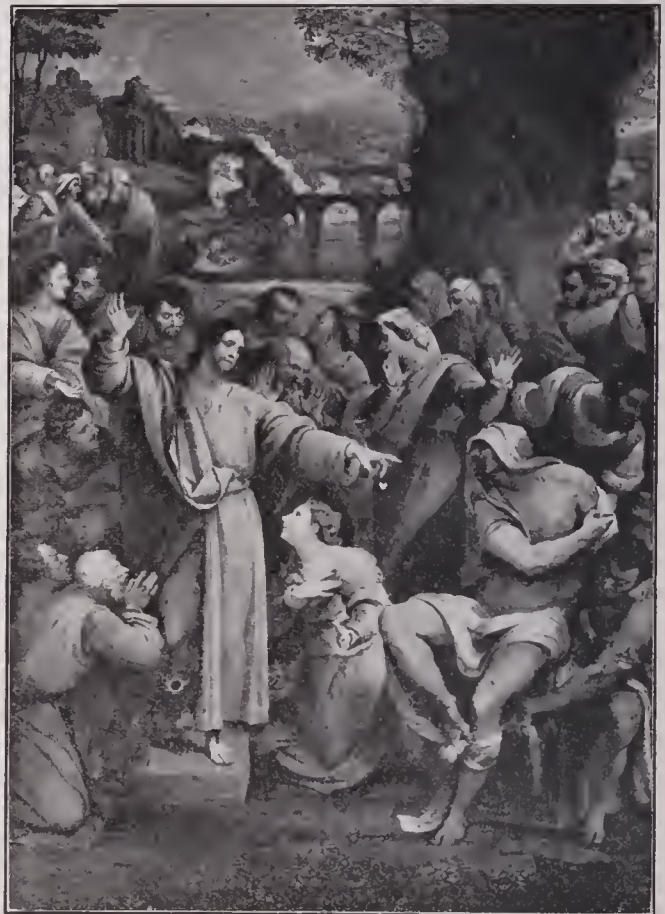
Jerseys, The.—A collective name for East and West Jersey, into which N. J. was temporarily divided in 1676.

Jerusalem.—The ancient capital of Palestine, and is regarded as a holy city by Jews, Christians, and Mohammedans. It is in the center of the country, 33 miles from the sea and 19 miles from the Jordan. Pop., about 40,000.

Jesuits.—The members of the Society of Jesus, founded by Ignatius Loyola in 1534. They have been expelled for political reasons from several countries, were suppressed in 1773 by the Pope, but were revived again in 1814.

JESUS.—

Jesus is the personal name of Christ, meaning "the anointed," the official name of the central figure of Christianity, the object of worship of his followers. According to the belief of the Christian church he was born at the village of Bethlehem, Judea, of a virgin mother. The date of his birth is now believed to be about four years earlier than the Christian era. In order to avoid persecution his reputed parents



LAZARUS

fled with him, in his infancy, into Egypt. Returning to Palestine the family settled in Nazareth, where the child grew to manhood in the home of poverty, working at the carpenter's trade. When he reached the age of thirty he entered definitely upon his ministry. This was inaugurated by the rite of baptism adminis-



THE GOOD SHEPHERD

tered by John the Baptist. Following this came a period of retirement in the wilderness, known as "the temptation." He then collected a band of disciples, twelve in number, whom he also called apostles. With these he journeyed back and forth over the territories of Galilee and Judea "preaching the kingdom" and doing deeds which are variously described as miracles, signs, and wonders. His purpose was to establish the kingdom of God in the world by preaching its principles to the people at large, incidentally confirming his preaching by works which were also signs; while at the same time he gave no less care to the training of the twelve so that they might in the future continue the work which he personally inaugurated.

The narratives of his life, recorded by four evangelists, two of whom were apostles, were not written until many years after his death; which had this advantage that it gave the writers time to see the events in true perspective. Only the most salient events of his life and the most suggestive of his words are given, and in recording these each writer regards the subject from his own point of view. Apart from the discourse, known as the Sermon on the Mount, and a few conversations recorded by the evangelist John, the teaching of Jesus was given mainly in the form of parables, such as are easy to remember and carry their own application. The writers state many times that vast numbers of miracles were wrought, and

thus imply that those that are recorded, of which there only about forty, are given only as specimens. The main characteristic of these works is their sympathy and benevolence. For the most part they consist of healing the sick, including demoniacs, and there are three cases of raising the dead. In the early part of his ministry the ecclesiastical sect of the Pharisees were favorably disposed toward Jesus and would gladly have treated him at least as the coming man; but his scathing denunciation of their pride and hypocrisy, and his persistent disregard of their customs, changed their favor into the bitterest hostility. With the rival sect of the Sadducees, who were the priestly class, and Jesus, there was little in common at any time, these people being aristocratic, wealthy, and unspiritual. These two sects sunk for the time being their mutual hostility and united with the purpose of crushing Jesus. After a public ministry of about three years, he was, at the time of the feast of the pass-over in Jerusalem, betrayed by his disciple Judas Iscariot, apprehended, tried before the ecclesiastical tribunal known as the Sanhedrin, and by them sentenced to death. As they had not the power to carry out their sentence, they took him to the judgment seat of the Roman procurator, Pontius Pilate, demanding the right to carry out their Jewish law, and adding other charges of a political nature.



HEALING THE SICK

Jesus.—*Continued*

Pilate, protesting that he found no fault in Jesus, finally delivered him up to his enemies to do their will. In scenes of great cruelty he was taken out of the city and crucified upon a hill called Golgotha, or Calvary. The day of the crucifixion is set apart in the church, following the Jewish calendar of the passover, as Good Friday. He was buried that same afternoon, his grave was closed with the imperial seal of Rome, and a guard of Roman soldiers was detailed to watch the tomb. On the third day, according to the Jewish method of reckoning, the day that corresponds to our Easter Sunday, the grave was found empty: the Lord had risen from the dead. For forty days following the resurrection, Jesus associated with his disciples, though apparently with less intimacy than before, and while he was seen by many,—“above five hundred brethren at once,”—he did not resume his works of healing nor his discourses to the people. He instructed his disciples to continue the work which he had initiated, his last command being, “Go ye into all the world and preach the Gospel to every creature.” In the presence of his disciples upon the summit of the Mount of Olives, he ascended until a cloud received him out of their sight.

Jetsam.—Goods which, thrown into the sea, have sunk.

Jevons, William Stanley.—(1835-1882.) An English logician and political economist.

Jew, The Wandering.—The “Wandering Jew” was last seen in the 17th century. On Jan. 1, 1644, he appeared in Paris, and created a great sensation among all ranks. He claimed to have lived 1,600 years, and to have traveled through all regions of the world. He was visited by many prominent personages, and no one could accost him in a language of which he was ignorant. He replied readily and without embarrassment to any questions propounded, and he was never confounded by any amount of cross-questioning. He seemed familiar with the history of persons and events from the time of Christ, and claimed an acquaintance with the celebrated characters of sixteen centuries. Of himself he said that he was an usher of the court of judgment in Jerusalem, where all criminal cases were tried at the time of our Saviour; that his name was Michab Ader; and that for thrusting Jesus out of the hall with these words, “Go, why tarriest thou?” the Messiah answered him, “I go, but tarry thou till I come,” thereby condemning him to live till the day of judgment. The learned looked upon him as an impostor or madman, yet took their departure bewildered and astonished.

Jewelry, Making and Selling.—5286.

Jewels.—2346.

Jewel-Weed, The.—2896.

Jews, Number of, in the World.—According to the “Jewish Year Book,” there are 11½ millions of

Jews distributed throughout the world. Of this total 6 millions are to be found in Russia, nearly 2 millions in Austro-Hungary, 1½ millions in the United States, Canada, and South America, about 600,000 in Germany, 160,000 in Great Britain, 100,000 in Holland, 150,000 in Morocco, 50,000 in Russia in Asia, 105,000 in Tripolis and Tunis, 270,000 in Rumania, 450,000 in Turkey and Turkey in Asia, 50,000 in Abyssinia, 44,000 in Algeria and the Sahara, 30,000 in Bulgaria, 80,000 in France, 40,000 in Italy, 35,000 in Persia, and 25,000 in Egypt.

“Jim Crow.”—A negro dramatic song and dance, first brought out by Thomas D. Rice, the first “negro minstrel” in Washington, in 1835. Joseph Jefferson, when only four years old, appeared with him in this dance.

Jingoism.—The term originated in England during the Russo-Turkish War, when the Conservative party under Lord Beaconsfield strongly advocated intervention in behalf of Turkey, while the Liberals, headed by Gladstone, were as strongly opposed. Popular interest in the discussion was great and found expression in the song:—

“We don't want to fight, but, by *jingo*, if we do,
We've got the ships, we've got the men,
We've got the money too.”

Hence the word Jingo came to be applied to the war party. It is now commonly applied both in England and America to parties extravagantly enthusiastic in defense of the national honor.

“Jingo” Statesman.—See CLAY, HENRY, 113.

Job.—The title of one of the books of the Old Testament, and also the name of its subject. The prologue and epilogue of the work are in prose, but the main body is in verse, possessing great literary and spiritual beauty. Carlyle called it the greatest poem in the world. Two subjects



JOB

are discussed: The mystery of suffering, and the soul's quest after God. The trend of thought is indicated in two sentences: “Oh that I knew where I might find him!” and “I have heard of thee by the hearing of the ear, but now mine

eye seeth thee." Job himself has passed into popular thought as the model of patience.

Johannesburg (*yo-hän nes-börg*).—A town in the Transvaal, in South Africa, the center of gold-fields and an important place during the Boer War. Pop., 102,714.

Johnnies and Johnny.—A familiar epithet universally applied by the Union soldiers to those of the Confederate army, during the Civil War; analogous to the "Yankees" or "Yauks" by which the Confederate soldiers spoke of or to their antagonists.

Johns Hopkins University.—A famed institution of learning founded by Johns Hopkins at Baltimore, Md. By his will he bequeathed \$7,000,000 in 1873 to be divided between the Johns Hopkins hospital and the university which was incorporated in 1867 and opened for instruction in 1876. Attached to it is a collegiate department for under-graduates, as also a medical school which practically forms part of the university.

Johnson, Andrew.—Seventeenth President; sketch of, 339.

Johnson, Eastman.—Born at Lowell, Me., 1824. A noted genre and portrait painter, elected academician in 1860. His chief productions are "The Old Kentucky Home," "The Old Stage Coach," "Husking Bee," "Cranberry Harvest," etc.

Johnson, Edward.—(1599-1672.) He was a joiner by trade and emigrated to America in 1630. He was a member of the Mass. House of Representatives (1643-71, except 1648) of which he became the speaker in 1655. He was the author of a "History of New England from the English Planting in 1628 until 1652."

Johnson, Herschel Vespasian.—(1812-1880.) He became U. S. senator from Ga. in 1848, governor of Ga. in 1853; Democratic candidate for the Vice-presidency in 1860, and Confederate senator.

Johnson, Isaac.—Born in England; died at Boston, Mass., 1630. Noted as one of the founders of Massachusetts. He emigrated with Winthrop to America in 1630 and superintended the settlement of Shawmut or Boston.

Johnson, Reverdy.—(1796-1876.) An eminent lawyer and diplomatist. He became U. S. senator from Md. (1845-49 and 1863-68), attorney-general (1849-50), U. S. minister to Great Britain (1868-69), and negotiated a treaty with England for the settlement of the Alabama Claims, which, however, was rejected by the Senate.

Johnson, Richard Mentor.—(1780-1850.) He became member of Congress from Ky. (1807-19 and 1829-37), U. S. senator (1819-29). He was elected Democratic Vice-president in 1837, but was defeated in his candidature for the Vice-presidency in 1840.

Johnson, Samuel.—(1709-1784.) The celebrated English lexicographer, poet, and essayist.

Johnson, Samuel.—Born at Guilford, Conn., 1696; died at Stratford, Conn., 1772. A clergyman and educator; the first president of King's College (Columbia College), New York (1754-63).

Johnson, Sir William.—Born in Ireland, 1715; died near Johnstown, N. Y., 1774. Distinguished as a British commander and magistrate in America

and superintendent of Indian affairs in the colonies. He was appointed by Governor George Clinton, colonel of the Six Nations in 1744, and commanded the provincial forces in the attack against Crown Point, and also of the Indian forces in the advance of Amherst on Montreal. He obtained a grant of land called King's land in the Mohawk Valley, where he built Fort Johnson in 1743, and was the first to introduce sheep and blooded horses. He was the author of "Transactions of the Philosophical Society," a paper on the "Languages, Customs, and Manners of the Indian Six Nations."

Johnson, William Samuel.—(1727-1819.) Son of Samuel Johnson, president of Columbia College (1787-1800).

Johnston, Albert Sidney.—Soldier; sketch of, 343.

Johnston, Alexander.—(1849-1889.) A noted historian. After being admitted to the bar in 1876, he became professor of jurisprudence and political economy in Princeton College from 1883 until his death. He published a "History of American Politics," "The Genesis of a New England State," "A History of the U. S.," "Connecticut, a Study of a Commonwealth Democracy," and "The United States; Its History and Constitution."

Johnston, John Taylor.—(1829-1893.) Noted as a business man and a philanthropist. He became president of the Central Railroad of New Jersey from its origin till 1877, and sacrificed his fortune in order to sustain its credit. He was the first president of the Metropolitan Museum of Art, of which he was one of the organizers. He was connected with many other educational and benevolent institutions.

Johnston, Joseph Eggleston.—Soldier; sketch of, 348.

Johnston, Samuel.—(1733-1816.) With his father he came to America in 1736, and became a member of the Continental Congress in 1781; governor of N. C., 1788; U. S. senator (1789-93), and judge of the Supreme Court (1800-03).

Johnstown.—(1) A city in Pa., situated on Stony Creek and Conemaugh River, noted for its iron manufactories. It was destroyed in 1889 by the bursting of a reservoir, with the loss of about 3,000 lives. Pop. (1900), 35,936. (2) A town in N. Y., on Cayadutta Creek, noted for its manufactures. Pop. (1900), 10,130.

Joint Tenants.—Those who have a unity of time, title, and possession in real property.

Joliet.—A city in Ill., important for its railway and manufacturing industries. It contains the state prison. Pop. (1900), 29,353.

Jonathan, or Brother Jonathan.—A name applied to the typical American, supposed to have originated from Washington's reference to his friend and adviser, Jonathan Trumbull, governor of Conn.

Jon Bee.—A pseudonym used by John Badcock.

Jones, Anson.—(1798-1858.) He was president of Texas (1844-45).

Jones, Hugh Bolton.—Born at Baltimore, Md., 1848. A noted landscape painter. His chief productions were "The Return of the Cows," "The Poplars," "Near Maplewood," "Breaking Flax."

Jones, Inigo.—(1573-1652.) A noted English architect.
Jones, Jacob.—(1770-1850.) A naval officer, noted as the commander of the "Wasp" at the capture of the "Frolic" in 1812.

Jones, John Paul.—Naval commander; sketch of, 354.

Jones, Sir William.—(1746-1794.) A famous English Orientalist, linguist, and poet; the first English scholar to master the Sanskrit language.

Jonesboro (Ga.), Battle of.—The last action of Sherman's campaign to Atlanta, in 1864. Sept. 1, Gen. Hood, the Confederate commander, who had become aware of the presence of Sherman's army below Atlanta, detached the corps of Hardee and sent it to Jonesboro, twenty miles south of the city. Hardee encountered there the 14th corps of Sherman and a severe engagement followed, resulting in the defeat of the Confederates. Both sides lost heavily. That night Hood evacuated Atlanta and it was immediately occupied by Sherman's troops.

Jonson, Benjamin.—Generally known as Ben Jonson (1573-1637.) A famous English dramatist.

Joplin City.—A city in southwestern Mo., center of a mining district. Pop. (1900), 26,023.

Jordaens, Jacob.—3490.

Jordan.—A river in Palestine, rises in Anti-Libanus, flows through the Sea of Galilee into the Dead Sea, about 19 miles from Jerusalem, after a course of 120 miles.

Jordan.—A river in Utah flowing from Utah Lake into Great Salt Lake, length about 40 miles.

Jordan, David Starr.—Born at Gainesville, N. Y., 1851. He became assistant on the U. S. Fish Commission (1877-91); professor of zoölogy at the Indiana University (1879-85), and its president (1885-91). Subsequently he was appointed president of the Leland Stanford Junior University. He wrote "Manual of the Vertebrates of the Northern U. S.," "Science Sketches," etc.

Joseffy (jō-sef'i), Rafael.—A Hungarian pianist and composer, and pupil of Tausig, was born in Presburg, in 1852.

Joseph, Story of (Arabic Legend).—1450.

Josephus, Flavius.—(37-95.) A Jewish historian. His history of the Jewish race from earliest times down to 26 A.D. is an important source of information upon the events of his time.

Josh Billings.—The literary pseudonym of Henry W. Shaw.

Journalism.—3117.

Business Management, 3118.

Editorial Staff, 3120.

Salaries, 3121.

Rewards, 3122.

The Evening Paper, 3123.

The Sunday Paper, 3124.

Art Department, 3124.

Associated Press, 3124.

Yellow Journalism, 3126.

Circulation and Advertising, 3126.

Reporting, 3128.

The Washington Correspondent, 3136.

The Special Correspondent, 3138.

The Woman Reporter, 3140.

The Stepping-Stone, 3142.

Journalism and the Career It Offers.—4994.

Journallism, The Young Man and Metropolitan.—4990.

Journalism, Yellow.—3126.

Journals of Congress.—The proceedings of Congress from 1774 to 1788 were published at Philadelphia in 13 octavo volumes, and reprinted at Washington in 1821, in four octavo volumes. This is the only record of the Continental and Confederation Congresses, except the "Secret Journals." "The journals, acts, and proceedings of the Convention assembled at Philadelphia which framed the Constitution of the U. S.," were published at Boston in 1819. In 1821 four volumes of the "Secret Journals of the Acts and Proceedings of Congress from the first Meeting thereof to the Dissolution of the Confederation by the Adoption of the Constitution of the United States," were published at Boston. According to the requirements of the Constitution, the Journals of Congress have been printed each session since its adoption.

Juan Fernandez (hō-än' fer-nän'deth).—An island in the South Pacific belonging to Chile. It is famous as the residence of Alexander Selkirk (1704-09).

Judas Iscariot, who was an apostle of our Lord. Treasurer of the little company he habitually



JUDAS ISCARIOT

purloined from the common purse. He finally betrayed his Master. Afterward repenting he was abandoned by the chief priests and found

- death in suicide. They buried him in the "potter's field" purchased with the price of his betrayal.
- Judgment.**—A judicial decree.
- Judiciary.**—The Federal judiciary system was modeled after that of Great Britain. At the beginning of the Revolution, the states abolished their higher courts and gave their functions to the common-law courts whose judges were usually appointed by the governors. The first steps toward a Federal judiciary were the commissions which decided land cases between the states. Commissioners of appeal decided prize cases, and in 1781, under the Articles of Confederation, these were formed into a court. The Constitution of 1787 provided for a Supreme Court and such inferior courts as Congress might establish. Circuit and district courts were established by the judiciary act of 1789. In 1791, the circuit court of appeals was added to the system. The court of claims, the court of private land claims, and a system of territorial courts have also been established by Congress. The judiciary system of the several states is similar in a general way to that of the U. S. (See COURTS.)
- Judson, Adoniram.**—Born at Malden, Mass., 1788; died at sea, 1850. A Baptist missionary who went to Burma in 1813. He translated the Bible into the Burmese language and compiled a Burmese-English dictionary.
- Juilliard vs. Greenman.**—A case resulting in an important decision by the Supreme Court in regard to legal tender. Juilliard contracted a sale of cotton to Greenman, who paid part of the bill in coin and offered the remainder in U. S. notes. Juilliard refused to accept the notes and demanded gold or silver. The case came before the circuit court of the southern district of N. Y., which decided in favor of Greenman, on the ground that notes issued by the U. S. are legal tender for payment of any debt. It was appealed to the Supreme Court, which Mar. 3, 1884, affirmed this judgment and thus established the constitutionality of the legal-tender act of Mar. 31, 1862.
- July.**—The seventh month of the year, consisting of thirty-one days. It was named after Julius Cæsar, by whom it was introduced into the calendar.
- Jumps, Grasshopper.**—1824.
- Juniata.**—A river in Pa., formed by the junction of the Little Juniata; joins the Susquehanna 13 miles northwest of Harrisburg; is noted for its picturesque scenery.
- Junipers, The.**—2880.
- Junius.**—The pseudonym under which the unknown author (probably Sir Philip Francis) wrote a series of letters against the British ministry, Sir William Draper, and others (1768-1772).
- Juno.**—See GREEK AND ROMAN MYTHOLOGY, 1606.
- Jupiter.**—See GREEK AND ROMAN MYTHOLOGY, 1604.
- Jupiter.**—See PLANETS, 2991.
- Jura.**—A chain of mountains in France and Switzerland, extending about 180 miles and reaching its highest elevation in peaks over 5,000 feet high.
- Jury.**—A certain number of men selected according to law and sworn to inquire into and determine facts concerning a cause or an accusation submitted to them, and to declare the truth according to the evidence adduced. The custom of trying accused persons before a jury, as practised in this country and England, is the natural outgrowth of rudimentary forms of trial in vogue among our Anglo-Saxon ancestors. The ancient Romans also had a form of trial before a presiding judge and a body of *judices*. The right of trial by jury is guaranteed by the U. S. Constitution in all criminal cases, and in civil cases where the amount in dispute exceeds \$20. A petit or trial jury consists of 12 men, selected by lot from among the citizens residing within the jurisdiction of the court. Their duty is to determine questions of fact in accordance with the weight of testimony presented and report their finding to the presiding judge. An impartial jury is assured by drawing by lot and then giving the accused, in a criminal case, the right to dismiss a certain number without reason and certain others for good cause. Each of the jurors must meet certain legal requirements as to capacity in general and fitness for the particular case upon which he is to sit, and must take an oath to decide without prejudice and according to the testimony. A coroner's jury or jury of inquest is usually composed of from six to 15 persons, summoned to inquire into the cause of sudden or unexplained deaths. (See GRAND JURY.)
- Justice, Department of.**—One of the eight executive departments of the U. S. Government. In 1789 Congress created the office of attorney-general, and Edmund Randolph was appointed to fill it. It was not till 1858 that it was found necessary to appoint an assistant. All U. S. district attorneys and marshals were placed under the supervision of the attorney-general in 1861. Second and third assistants were attached to the office in 1868 and 1871 respectively. June 22, 1870, the Department of Justice was created. (See also ATTORNEY-GENERAL.)
- Justin, Saint, "The Martyr."**—A Greek Church father, who was scourged and beheaded at Rome about 163 A.D.
- Justinian, "The Great."**—(483-565.) A Byzantine emperor (527-565) who issued a compilation and annotation of Roman Law, which is known as the "Justinian Code."
- Juvenal.**—(60-140.) A Roman satirist and poet.

K

- Kabul, or Cabul.**—A division in Afghanistan. The capital is Kabul and is situated on a river of the same name on a plateau 6,000 feet above sea-level. The population of the city is about 70,000. The river is 270 miles long and flows into the Indus.
- Kaffir.**—A name variously applied to the Xosa, Pondo, Tembu tribes, the Zulus, and the Bantu family or all African negroes south of the equator.
- Kafiristan.**—A district in Central Asia, on the border of Afghanistan.
- Kagoshima.**—A seaport in Japan, on the island of Kiusiu. Pop., 56,643.
- Kaiser Wilhelm Islands** are situated in the Antarctic Ocean and belong to Graham Land.
- Kaiser Wilhelm's Land.**—A German protectorate in the northeast of New Guinea was founded in 1884. It includes about 72,000 square miles of territory with a population of about 110,000.
- Kalahari Desert.**—A partially desert region in South Africa, north of the Orange River and lying almost wholly within the limits of Bechuanaland.
- Kalakaua I., David.**—Born, 1836; died at San Francisco, 1891. King of Hawaii (1874-91). Elected, 1874; compelled by a revolutionary movement to grant a new constitution imposing important restriction on the royal prerogative.
- Kalamazoo.**—The capital of Kalamazoo Co., Mich., on the Kalamazoo River; the seat of Kalamazoo College; has various manufactures. Pop. (1900), 24,404.
- Kalamis.**—3542.
- Kalevala, The.**—1749.
- Kali.**—1522.
- Kalidasa.**—The greatest poet and dramatist of India, about whose life nothing is known. The period of his life is estimated by scholars at periods varying from 56 B.C. to the 8th century. His fame rests chiefly upon the drama "Shakuntala," first translated by Sir William Jones in 1789.
- Kalpa.**—1525.
- Kamchatka.**—A peninsula of eastern Siberia, between Bering Sea and the Sea of Okhotsk. Pop., 6,500.
- Kamerun, or Cameroon.**—A German colony in West Africa extending along the Kamerun River from the Bight of Biafra to Lake Chad. It has a population of 3,500,000. It is traversed by the Kamerun Mountains which have an extreme height of 13,000 feet.
- Kamloops.**—In Canada, British Columbia, the principal town in the Thompson River valley. Its chief industry is grazing. Agriculture and fruit raising flourish. Kamloops is the supply point for a large ranching and mineral region. Pop. (1901), 1,594.
- Kandahar.**—A province and city of southern Afghanistan. The city, said to have been founded by Alexander the Great, has a population of 25,560.
- Kandy, or Candy.**—A town in the island of Ceylon, 60 miles from Colombo. Pop., 20,558.
- Kane, Elisha Kent.**—A physician, scientist, and Arctic explorer; born at Philadelphia, Pa., 1820; died at Havana, Cuba, 1857. He accompanied the first Grinnell expedition in search of Sir John Franklin (1850-51); led the second Grinnell expedition (1853-55); wrote two volumes descriptive of his Arctic voyages.
- Kangaroo, The.**—2472.
- Kankakee.**—A city in Illinois on the Kankakee River, 54 miles from Chicago. Pop. (1900), 13,595.
- Kansas.**—Formerly considered to be in the far West, but now one of the North Central States of the American Union. Bounded on the north by Neb., east by Mo., south by Okla. and Ind. Ter., and west by Col. It was part of the Louisiana Purchase, and was made a separate territory in 1854. During the next half dozen years it was the scene of a conflict amounting to civil war, between the friends and opponents of slavery. The repeal of the Missouri Compromise had left to the decision of the people the question whether it should be free or slave territory, and there was a large immigration from both North and South. There was much lawlessness and violence and many conflicts of arms, which resulted in loss of life. John Brown, afterward leader of the Harper's Ferry insurrection, was prominent in the troubles in Kan. The Topeka Constitution, prohibiting slavery, was formed in 1855, and the Leecompton Constitution, favoring slavery, in 1857; the Wyandotte Constitution, which prohibited slavery, was finally adopted, in 1859, and Kan. was admitted as a state, Jan. 29, 1861. It suffered much from Confederate raids during the Civil War. The soil is fertile and agriculture and stock raising are the chief industries; coal is the principal mineral product. The capital is Topeka, and other principal towns are Kansas City, Wichita, Leavenworth, Atchison, Fort Scott, Lawrence, Emporia, and Salina; has 106 counties; area, 82,080 sq. miles; pop. (1900), 1,470,495; called the Sunflower State, sometimes, also, the Grasshopper State, from the plague of these insects that infested it for many years.
- Kansas Aid Society.**—An organization formed in the Northern States, in 1854, to promote the emigration of Free-state men to Kansas. Under the provisions of the Kansas-Nebraska Act, passed by Congress in May, 1854, the question of slavery in those Territories was left to the will of the people, on the principle of local option, or "squatter sovereignty." An association, which had already been formed in Mass., began sending antislavery settlers into the Territory to forestall its settlement by slaveholders. Similar societies were organized in N. Y. and Conn. Meantime slavery advocates from Mo. and Ark. passed over the border and preempted large

- tracts of fertile lands. For four years the conflict for supremacy raged between the two parties. The antislavery party finally prevailed and Kansas was admitted as a free State.
- Kansas City.**—(1) The largest city of Kan., capital of Wyandotte Co., situated on the Missouri River opposite Kansas City, Mo. Pork-packing is the leading industry. Pop. (1900), 51,418. (2) Kansas City, Mo., the second city of the state, an important railway center also celebrated for its meat-packing industry. Pop. (1900), 163,752.
- Kansas-Nebraska Act.**—By the Missouri Compromise of 1820 slavery was prohibited in all territory lying north of lat. $36^{\circ} 30'$, with the exception of the state of Mo. By the Kansas-Nebraska Act, passed by Congress in 1854, Kan. and Neb. were separated and organized into two distinct territories, and the question of slavery was left to the people for settlement. As both these States lie north of the line above which slavery was prohibited by the Missouri Compromise, the passage of the bill abrogated that measure. The status of Neb. as a free State was soon determined, but the struggle in Kan. was long and bitter. It disrupted the Whig party and led to the establishment of the Republican party, and was an important link in the chain of events that brought on the Civil War. (See KANSAS. See also BROWN, JOHN, 71-2.)
- Kansas River.**—A river in Kan. which joins the Missouri near Kansas City; length about 900 miles.
- Kant, Immanuel.**—(1724-1804.) One of the most influential philosophers of modern times, and founder of the "Critical Philosophy." A native of Königsberg, Prussia.
- Karlsbad, or Carlsbad.**—A town and famous watering-place in Bohemia. Its mineral springs, it is said, were discovered by Emperor Charles IV. in 1347.
- Karnak.**—A village in Egypt situated on the Nile, on the site of Thebes; famous for its antiquities.
- Karr, Jean Baptiste Alphonse.**—(1808-1890.) A French novelist, journalist, and satirist.
- Kars.**—A Russian Transcaucasia province, bordering on Asiatic Turkey. Area, 7,308 square miles. Also a fortress and town, capital of the Province. Pop., 20,981.
- Kashmir, or Cashmere.**—An Asiatic native state under British control. It is bounded on the north by Eastern Turkestan, Thibet on the east, India on the south and southwest, and Dardistan and the Pamirs on the west and northwest. Its capital is Srinagar. Area, with Jammu, 80,900 square miles; population (1901), 2,906,173.
- Kathay, or Cathay.**—A name early given by Europe to Chiua, and by which it is at present known in Russia, Persia, and Turkestan.
- Katrine, Loch.**—A lake in Perthshire, Scotland, a few miles from Glasgow. It is noted for its scenery, and contains Ellen's Isle, mentioned in Scott's "Lady of the Lake."
- Katydid, The.**—2781.
- Kaulbach, Wilhelm von.**—(1805-1874.) A noted German painter.
- Kavanagh, Julia.**—(1824-1877.) A British novelist. Her works are numerous and treat chiefly of Irish life and scenery.
- Kay, John.**—(1742-1826.) A Scottish painter and etcher.
- Kean, Charles John.**—(1811-1868.) English actor, son of Edmund Kean.
- Kean, Edmund.**—(1787-1833.) Celebrated English actor.
- Kearny, Philip.**—Born in N. Y., 1815; killed at Chantilly, Va., Sept. 1, 1862. A distinguished officer of the U. S. army. He entered the army as a 2d lieut. in 1837; served with the French in Algiers (1839-40); won distinction in the Mexican War, losing an arm; and was brevetted major for gallantry at Contreras and Churubusco. In 1859 he was again with the French and was decorated for his bravery at Solferino; returned to the U. S. and entered the Civil War as brig.-gen., being promoted to maj.-gen. in 1862; served conspicuously in the Army of the Potomac till he fell as above, the day after Pope's defeat at Manassas. "Phil" Kearny was a born soldier and a most gallant leader; when there was no fighting to be found at home, he sought it abroad.
- "Kearsarge," The.**—A U. S. war steamer which, under the command of John A. Winslow, sank the Confederate cruiser "Alabama," in action off the harbor of Cherbourg, France, June 19, 1864. (See WINSLOW, JOHN ANCRUM, 623; SEMMES, RAPHAEL, 508.)
- Keats, John.**—(1795-1821.) Famous English poet. He first studied medicine, but after taking his degree never practised. Becoming acquainted with Leigh Hunt, Shelley, and Haydon, he turned his attention to authorship, wrote extensively for the periodicals, and in 1817 his first collection of poems was published.
- Keble, John.**—(1792-1866.) An English clergyman and religious poet. He was one of the chief promoters of the Oxford Movement, and is known at the present time principally as the author of "The Christian Year."
- Kedron.**—A brook that passes around Jerusalem and flows into the Dead Sea.
- Keene, Laura.**—Born in England, 1820; died at Montclair, N. J., 1873. A celebrated light-comedy actress. She was the lessee of the Olympic Theater in New York (1855-63), where she brought out many new plays, among them "Our American Cousin," with Jeffersou and Sothern in the cast. She was playing this piece at Ford's Theater, Washington, D. C., when Abraham Lincoln was assassinated.
- Kelat, or Khelat.**—Capital of Baluchistan. Occupied by England during the Afghan War.
- Kelley, William Darrah.**—Born at Phila., 1814; died at Washington, D. C., 1890. An economist and politician. He was admitted to the bar in 1841; was Republican member of Congress from Pa. from 1861 until his death; was an ardent advocate of a protective tariff; he was for many years chairman of the committee on ways and means, in which capacity he had much to do with the preparation of tariff bills.
- Kellogg, Clara Louise.**—Born at Sumterville, S. C., 1842. An opera singer, who made her first appearance in New York in 1861. She did much

- for music in America by organizing (1874) an English opera company.
- Kelly, John.**—Born at New York, 1821; died there, 1886. He was a member of Congress and the leader of the political Tammany Society of New York City.
- Kelp.**—An alkaline matter produced by the combustion of sea-weeds. They are dried in the sun, then burned in shallow excavations at a low heat. Twenty to twenty-four tons of sea-weed produce one ton of kelp.
- Kelvin, Lord.**—See THOMSON, WILLIAM.
- Kemble, Adelaide.**—(1814-1879.) A noted operatic singer, daughter of Charles Kemble.
- Kemble, Charles.**—(1775-1854.) A famous English actor; he visited America, with his daughter Fanny, in 1832, and appeared in New York in "Hamlet."
- Kemble, Fanny (FRANCES ANNE).**—(1809-1893.) Actress, reader, and author; daughter of Charles Kemble.
- Kemble, George Stephen.**—(1758-1822.) An English actor, brother of John Philip Kemble.
- Kemble, John Mitchell.**—(1807-1857.) An English historian and philologist. Son of Charles Kemble.
- Kemble, John Philip.**—(1757-1823.) A celebrated English tragedian, son of Roger Kemble.
- Kempenfeldt, Richard.**—(1718-1782.) An English rear-admiral who was lost with the "Royal George" off Spithead, Aug. 29, 1782. In refitting his ship the guns were shifted to one side to give her a slight heel, but the strain was too great and she broke up and went down with her admiral on board.
- Kemper, Reuben.**—Born at Va.; died in Miss., 1826. A soldier. He commanded in 1812 a force of Americans coöperating with the Mexican insurgents against Spain. In 1815 he served under Gen. Jackson, against the British at New Orleans.
- Kempis, Thomas à.**—See THOMAS À KEMPIS.
- Kendal, Mrs. (MARGARET BRUNTON ROBERTSON).** English actress. Born 1849. Wife of William Hunter Kendal.
- Kendal, William Hunter** (stage name assumed by WILLIAM HUNTER GRIMSTON). Born 1834. First appeared on the stage in 1861.
- Kendall, Amos.**—Born at Dunstable, Mass., 1789; died at Wash., D. C., 1869. A politician. He was associated with S. F. B. Morse in his telegraph patents; was postmaster-gen. (1835-40).
- Kenilworth.**—A town in Warwickshire, England. Kenilworth Castle, founded about 1120, was long a royal residence. Among the notable features of its ruins are the Norman keep.
- Kennan, George.**—Born at Norwalk, O., 1845. A traveler, lecturer, and writer. The Russo-American Telegraph Co. sent him to Siberia in 1864 to supervise the construction of lines. In 1885-86 he was sent by "The Century" Magazine to Russia to investigate the condition of Siberian exiles. He wrote "Siberia and the Exile System," and "Tent Life in Siberia."
- Kennebec.**—River in Maine, rises in Moosehead Lake and flows into the Atlantic, near Bath. Length 160 miles.
- Kennebec Purchase.**—In 1628, the council for New England granted to William Bradford and other Plymouth colonists a tract of territory along the Kennebec and Cobbiseecontee Rivers for fishing purposes. It was sold in 1661 to Tyng and others and has since been known as the Kennebec Purchase.
- Kennedy, John Pendleton.**—Born at Baltimore, 1795; died at Newport, R. I., 1870. A politician and novelist. He was a member of Congress from Md. (1839-45) and secretary of the navy (1852-1853). His chief novel is "Horse-Shoe Robinson."
- Kennesaw Mountain.**—One of the several high elevations, near Marietta, Ga., and about 25 miles northwest of Atlanta, which were occupied and strongly fortified by Gen. J. E. Johnston's Confederate army, in June, 1864. The position was an almost impregnable one, but Gen. Sherman determined to assault, and did so, June 27. The point chosen was a spur called Little Kennesaw, and the storming column was composed of one division of the 4th corps and one of the 14th corps, Army of the Cumberland, with a coöperating force on the left from the Army of the Tennessee. The assault was a gallant one, but it was repulsed. Sherman lost 3,000 men, while the loss of the Confederates was not above 500. Two brigadier-generals of the Union army, Charles G. Harker and Daniel McCook, were mortally wounded. (See ATLANTA CAMPAIGN).
- Kenosha.**—The capital of Kenosha Co., Wis., situated on Lake Michigan; a trading center. Pop. (1900), 11,606.
- Kensett, John Frederick.**—Born at Cheshire, Conn., 1818; died at New York, 1872. A landscape-painter. In 1859 he was appointed one of the commission to supervise the decoration of the capitol at Washington.
- Kensington.**—A parish and western suburb of London. It contains Holland House, Kensington Palace, and Kensington Gardens.
- Kent.**—The southeasternmost county of England. It is bounded by Essex and the North Sea on the north, the North Sea on the east, English Channel and Sussex on the south, and Surrey on the west. It has an extensive hop-raising industry.
- Kent, James.**—Born at Philippi, N. Y., 1763; died in New York City, 1847. A noted jurist. He was chief-justice of the supreme court of N. Y., 1804-14; his principal work is "Commentaries on American Law."
- Kent, William.**—(1684-1748.) An English painter, sculptor, architect, and landscape gardener.
- Kentucky.**—A southern central state of the U. S. of America. Bounded on the north by Ohio, Ind., and Ill., east by W. Va. and Va., south by Tenn., west by Mo. The name signifies "dark and bloody ground," so called from the many conflicts between the early settlers and the Indians. Daniel Boone was one of the first explorers of that region, beginning in 1769. The first permanent settlement was at Harrodsburg in 1774; Ky was made a county of Va. in 1776.

but was detached and admitted into the Union as a state in 1792. It was one of the slave states, but did not join in the secession movement of 1860-61. Its people were divided in sentiment and the state furnished a large number of soldiers for both the Union and Confederate armies. The state adhered to the Union, but it was represented in the Confederate Congress, as well as in the Congress of the U. S. It suffered greatly from raids and from its occupation by both armies; many minor actions took place within its limits, and one important battle, at Perryville, in Oct., 1862. The surface is mountainous in the east and undulating in the west; in the central part is the famous "Blue Grass region"; it leads all other states in the production of hemp and tobacco; the raising of horses, cattle, and mules is a leading industry; coal and iron are mined in large quantities. The capital is Frankfort and the chief city is Louisville, on the Ohio River; other chief towns are Covington, Lexington, Newport, Paducah, Owensboro, Henderson, and Bowling Green. It has 119 counties; area, 40,400 sq. miles; pop. (1900), 2,147,174; popularly called the Corncracker State.

Kentucky Resolutions.—Nine resolutions prepared by Thomas Jefferson and passed by the Ky. legislature in 1798. These and the Va. resolutions were the outcome of a feeling that the Federal party, in passing the Alien and Sedition Laws, was making an illegitimate use of the power granted to the government by the Constitution. The resolutions declared that the Union was not based on the "principle of unlimited submission to the general government"; that the Constitution was a compact to which each state was a party as related to its fellow states, and that in all cases not specified in the compact, each party had a right to judge for itself, as well of infractions as of the mode and measure of redress. They then proceeded to set forth the unconstitutionality of the Alien and Sedition Laws and invited other states to join in declaring them void. The tenth resolution was passed the following year declaring that nullification of a Federal law by a state was the rightful remedy for Federal usurpation of authority. Upon these resolutions were based in part the doctrines of nullification and secession.

Kenyon College.—A Protestant Episcopal seat of learning at Gambier, O.

Keokuk.—One of the capitals of Lee Co., Iowa, situated on the Mississippi River at the foot of the rapids; a railway center and canal terminus; meat-packing and iron manufactures are the important industries.

Kepler, Johann.—(1571-1630.) Celebrated German astronomer, one of the founders of modern astronomy. He was the discoverer of the three laws of planetary motion.

Kerry.—A maritime county in Munster, Ireland; chief town is Tralee. Pop. of county (1901), 165,331.

Kertch.—Russia. A seaport in the eastern part of the Crimea, noted for its antiquities. Pop. (1897), 29,000.

Ketch, John, or Jack.—A famous English executioner. Died, 1686.

Kettle Creek (Ga.), Battle of.—Feb. 14, 1779, Col. Andrew Pickens, of S. C., and Col. Dooley, of Ga., with 300 men, surprised Col. Boyd's provincials on the north side of Kettle Creek, in Wilkes Co., Ga. A short fight ensued, in which Boyd's Tories were routed, with inconsiderable loss on either side.

Keweenaw Point.—A peninsula in northern Mich., projecting into Lake Superior, noted for its copper mines. An arm of the lake at the same point is known as Keweenaw Bay.

Kew Gardens.—Botanical gardens originated by Lord Capel about the middle of the 18th century. They are situated on the Thames, nine miles west of London.

Key, Francis Scott.—Born in Frederick Co., Md., 1780; died at Baltimore, 1843. Author of "The Star-Spangled Banner" (which see).

Keyes, Erasmus Darwin.—Born at Brimfield, Mass., 1810; died, 1895. An officer of the U. S. army. He graduated at West Point and in 1860-61 was military secretary to Gen. Scott; was made maj.-gen. of Vols. in 1862 and commanded a division, and afterward a corps, in the Army of the Potomac. He wrote "Fifty Years' Observation of Men and Events."

Keystone State.—The name given to Pennsylvania, the central state of the original thirteen.

Key West.—(1) An island of the Florida Keys, belonging to Monroe Co., Fla., 60 miles southwest of Cape Sable. (2) An important U. S. naval station, a seaport, and capital of Monroe Co., on the island of Key West, famous for its manufacture of cigars.

Khartum.—A city of Nubia, Africa; founded by Mehemet Ali, in 1823. Pop., about 25,000.

Khiva.—Capital of Khiva, a khanate of Central Asia. Pop. about 5,000.

Khufu.—An Egyptian monarch of the 4th dynasty, who lived about 2800-2700 B.C.; builder of the great pyramid at Gizeh.

Khyber Pass.—In Afghanistan, a very difficult mountain pass, between Fort Jumrud and Dakka; an important strategic point.

Kickapoo Indians.—A tribe of the Algonquin stock of Indians, who early inhabited the valleys of the Ohio and Illinois rivers. In 1779 they allied themselves with the Americans against the British, but later turned and fought against the new government until they were subjugated by Wayne in 1795, when they ceded part of their lands to the whites. In 1802-03-04 they ceded more territory. In 1811 they joined Tecumseh and fought against the Americans at Tippecanoe and in 1812 united with the British but were badly defeated. By treaties made in 1815-16-19 they ceded still more of their territory, and about this period portions of them became roving bands. Some of them were removed to Kansas and afterward a portion of the tribe migrated to Mexico, whence about 300 were in 1873 returned by the government and placed on reservation in the Ind. Ter.

Kidd, William.—Born probably at Greenock, Scotland; hanged at Execution Dock, London, 1701;

a notorious pirate. In 1695, the governor of Massachusetts Bay placed Kidd in command of a privateer for the suppression of piracy. Kidd turned pirate himself; was arrested at Boston, 1699, and sent to England for trial, which resulted in his execution.

Kieff, or Kiev.—The capital of the government of Kieff, in southwestern Russia. It is sometimes called the "Mother City" of Russia, and contains an interesting cathedral.

Kiel.—In Prussia, a seaport in the province of Schleswig-Holstein; the chief German naval-station in the Baltic; noted for its fine harbor. Pop. (1900), 107,938.

Kilauea.—An active volcano in Hawaii. Height, 4,000 feet.

Kilbourn vs. Thompson.—A case decided by the Supreme Court in 1880, denying the right of the Senate and House of Representatives to punish anyone except their own members for contempt of their orders. Kilbourn was summoned as a witness before the House in 1876, and ordered to answer questions concerning his private business and to produce certain private papers. He refused, whereupon Sergeant-at-arms Thompson was ordered to imprison him in the jail of the District of Columbia. After remaining in prison 45 days, he was released on a writ of habeas corpus, when he brought suit for false imprisonment against Thompson and the members of the committee who caused his arrest. The court decided that the House might punish its own members for disorderly conduct, but that the Constitution did not give either branch of Congress general authority to punish for contempt. It was held that neither house of Congress is a part of any court of general jurisdiction. Judgment was given for Kilbourn for damages, which was paid by an appropriation of Congress.

Kildare.—(1) A county in Leinster, Ireland, famous for its antiquities. (2) An ancient town of County Kildare.

Kilimanjaro (Great Mountain).—The highest mountain in Africa, situated on the west border of Zanzibar. It reaches about 20,000 feet above sea-level.

Kilkenny.—The capital of County Kilkenny, Leinster, Ireland, situated about 60 miles southwest of Dublin. It contains the remains of a noble castle erected in the 12th century by Richard Strongbow.

Killarney.—A town in County Kerry, Ireland, made famous by its lakes of surpassing beauty.

Killdeer, The.—See PLOVER, 2517.

Killington Peak.—A peak of the Green Mountains in Rutland Co., Vt.; height, 4,240 ft.

Kilpatrick, Hugh Judson.—Born at Deckertown, N. J., 1836; died at Valparaiso, Chile, 1881. A celebrated cavalry officer of the U. S. army. He graduated at West Point in 1861 and at once entered upon active service in the Civil War; though young he won distinguished honor, reaching the rank of maj.-gen.; was first appointed colonel of the 2d N. Y. cavalry but was soon placed at the head of a brigade. After

many dashing enterprises during 1861-62 and 63, he served in 1864 as chief of cavalry in Sherman's army, and blazed the way during the march to the sea. During the succeeding Carolina campaign he very narrowly escaped capture, during a night attack on his bivouac by a force of Confederate cavalry. He was minister to Chile (1865-70) and was appointed to the same position in 1881, but died there the same year.

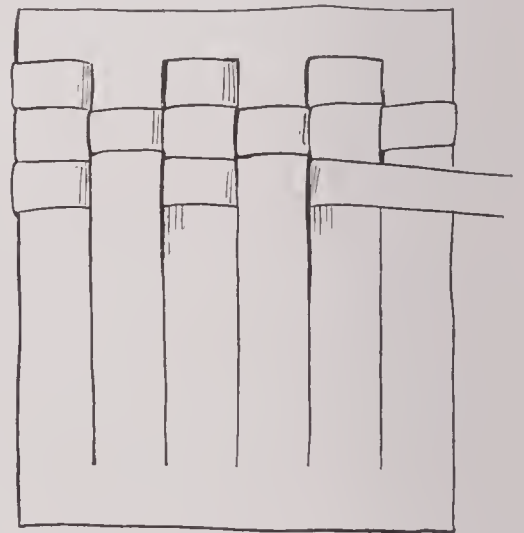
Kimball, Richard Burleigh.—Born at Plainfield N. H., 1816; died at New York, 1892. An author. He built part of the first railroad in Tex., and founded the town of Kimball in the same state. His writings include "Letters from Cuba," "Stories of Exceptional Life," and "Undercurrents of Wall Street."

Kimberley.—The capital of Griqualand West, South Africa, the diamond center of the world. It sustained in 1899 a severe siege by the Boers, but was successfully relieved by Gen. Methuen.



KINDERGARTEN

Kindergarten.—A training-place for children, instituted by Friedrich Froebel (1782-1852.) The system has made rapid progress in America and England, and in both countries there is a Froebel Society which consists of a large number of thinkers and workers in educational affairs.



KINDERGARTEN WEAVING

Kindergarten Designs.—3714.

Kindergarten Gifts in the Home, The.—3667.

King, Charles.—Born at New York, 1789; died in Italy, 1867. A journalist and educator, son of

- Rufus King; president of Columbia College (1849-64).
- King, Francis S.**—Born in Me., 1850. A noted wood-engraver; one of the organizers of the Society of American Wood-engravers.
- King, Thomas Starr.**—Born at New York, 1824, died at San Francisco, 1864. A Unitarian clergyman, lecturer, and author.
- King, William Rufus.**—Born at Sampson Co., N. C., 1786; died in Dallas Co., Ala., 1853. A noted statesman. He was member of Congress from N. C. (1811-16); U. S. senator from Ala. (1819-44); U. S. minister to France (1844-46); U. S. senator from Ala. (1846-53); was elected Democratic Vice-president in 1852, taking the oath of office at Havana in 1853.
- King Arthur.**—See ARTHURIAN LEGEND, 1782.
- Kingbird, The.**—See FLYCATCHER, 2585.
- Kingcrab.**—A genus of Crustacea, the sole living representative of the order *Merostomata*. The head and thorax are united, and covered by a shield, convex above, concave beneath. The American species is *Limulus Polyphemus*.
- Kingfisher, The.**—2533.
- King George's War.**—The war waged by Great Britain and her American colonies against the French and Indians—the American phase of the War of the Austrian Succession (1741-48); named from George II.
- Kinglake, Alexander William.**—(1809-1891.) An English author, historian of the Crimean War.
- King Philip's War.**—Philip, son of Massasoit, sachem of the Wampanoag Indians, and a friend of the early settlers of Plymouth, determined to drive away or kill all the European settlers in his colony. His camp was at Mount Hope, R. I., and his first blow was struck at Swansea, Mass., July 4, 1675. The settlers took up arms in defense and drove the enemy to the more remote settlements. Philip was reinforced by other tribes, but the Indians suffered many defeats, and were finally subdued. Philip was shot in a swamp by a treacherous Indian, and his head was carried in triumph to Plymouth.
- King's Daughters.**—A religious order founded by ten women in New York City, in 1886. It is interdenominational, and has adherents in all the churches and in many nations. The members are bound to serve the needy wherever found, and to aid in all good work. It numbers many thousands, and the badge of the order is a cross bearing date 1886, and the letters I. H. N.
- Kingsley, Charles.**—(1819-1875.) An English clergyman and author, an advocate of Christian socialism.
- Kingsley, Elbridge.**—Born at Carthage, Ohio, 1842, a noted wood-engraver. His engravings are chiefly of the works of Inness and of the Barbizon painters.
- King's Mountain (S. C.), Battle of.**—Early in Oct., 1780, Cornwallis sent Colonels Tarleton and Ferguson from Charleston to invade N. C., enroll local militia, and compel the allegiance of the people. Ferguson was hotly pursued by the Americans, and took up a strong position on King's Mountain, near the boundary line between North and South Carolina. On the 7th, the British, 1,500 strong, were attacked by the same number of American militia, under command of Colonels Shelby, Campbell, Cleveland, McDowell, Sevier, and Williams. After a struggle lasting an hour, in which Ferguson was killed, the British force surrendered.
- Kingston.**—The capital of Ulster Co., N. Y.; on the Hudson, 80 miles north of New York; an important river port, noted for the manufacture of cement. Pop. (1900), 24,535.
- King William's War.**—The war carried on by Great Britain and her colonies against France and her Indian allies; it was the American phase of the contest between England and other European powers, and Louis XIV. of France.
- Kioto.**—A city of the main island of Japan; until 1869 the residence of the Mikado. Pop. (1898), 353,139.
- Kipling, Rudyard.**—Anglo-Indian writer and "uncrowned laureate" of the British empire, was born at Bombay, India, Dec. 30, 1865, son of J. Lockwood Kipling, formerly head of the Lahore School of Industrial Art. He was educated at the United Services College in North Devon, England, and returning to India became a writer on the "Civil and Military Gazette" at Lahore, and composed poems, barrack-room ballads, and stories, the fame of which early brought him into prominence. He has traveled in China, Japan, Australia, Africa, and in the United States, where he married an American lady. His poems and tales descriptive of Anglo-Indian military and civil life have won him fame as a clever and entertaining as well as original writer. His chief publications embrace "Departmental Ditties," "Plain Tales from the Hills," "Phantom Rickshaw," "Soldiers Three," "The Story of the Gadsbys," "Under the Deodars," "The Light that Failed," "Life's Handicap," "Barrack-room Ballads," "Many Inventions," "The Jungle Book" (two series), "The Seven Seas," "Captains Courageous," "The Day's Work," "Stalky and Co.," and "Kim."
- Kirk, John Foster.**—Born at Fredericton, N. B., 1824. A historian and bibliographer; author of "History of Charles the Bold," and of a supplement to Allibone's "Dictionary of English Literature."
- Kirkbride, Thomas S.**—Born near Morrisville, Pa., 1809; died at Phila., 1883. A noted physician. He was superintendent of the Pa. Hospital for the Insane (1840-83).
- Kirke, Edmund.**—The pseudonym of James Roberts Gilmore, a noted author.
- Kirkland, Samuel.**—Born at Norwich, Conn., 1741; died at Clinton, N. Y., 1808. A Congregational clergyman, a missionary among the Oneida Indians in N. Y.
- Kirmiss, or Kermess.**—This word has of recent years come into use in the United States to describe a sort of entertainment usually given for charitable purposes in churches, and in religious and social organizations. The origin of the word appears to be Icelandic. The Kirmiss in the

- Low Countries of Holland and in French Flanders is usually an annual fair or town or village festival, sometimes held on the feast of patron saints and accompanied with religious observances, though more often with feasting, dancing, and other forms of amusement. The meaning of the word is a fair or church festival.
- Kitchen Cabinet.**—A name applied to a group of intimate political friends of Andrew Jackson, who, it is charged, had more influence over his official acts than his constitutional advisers. They were Gen. Duff Green, editor of the "United States Telegraph," published at Washington as an organ of the administration; Maj. William B. Lewis, of Nashville, Tenn., second auditor of the Treasury; Isaac Hill, editor of the "New Hampshire Patriot"; and Amos Kendall, of Ky., fourth auditor of the Treasury.
- Kitchener, General Horatio Herbert.**—Baron Kitchener of Khartoum, was born June 24, 1850, and educated at the Royal Military Academy at Woolwich. He entered the Royal Engineers in 1871, and early took part in surveys of Palestine and Cyprus, and in 1882-84 commanded the Egyptian cavalry, afterward reforming and remodeling the Khedive's army. In 1883-85 he served in the Sudan campaign, and in the three following years was governor of Snakim. As Sirdar of the Egyptian army he undertook operations against the Khalifa and his dervishes in revolt, and pushing on up the Nile he fought the battle of Omdurman, Sept. 2, 1898, inflicting defeat on the Khalifa's army, for which he was raised to the peerage, and promoted to be major-general in the British army. Early in 1900, he resigned the Egyptian Sirdarship to become chief of Lord Robert's staff in South Africa, later on succeeding the latter in full command of the British forces operating against the Boers.
- Kite.**—A genus of *Falconidae*, of which there is only one species, a native of Britain. The kite has a weaker bill and talons than the hawk, but the wings are much longer, and the tail is long and forked.
- Kittatinny or Blue Mountains.**—A range of mountains in southern N. Y., N. J., and northeastern Pa., belonging to the Appalachian system.
- Kittery.**—A seaport in Me. at the mouth of the Piscataqua River; contains a U. S. navy yard. Pop. (1900), 2,872.
- Kitto, John.**—(1804-54.) An English student who, though a layman, wrote or compiled several valuable books relating to the Bible.
- Kiusiu.**—One of the principal islands of Japan, situated southwest of the main island. Its chief city is Nagasaki.
- Klamath Indians.**—A tribe of Indians numbering about 600, distributed among 11 settlements in the Klamath reservation in Oregon. They formerly occupied a part of Cal., but the influx of whites led to trouble in 1851. Peace was soon restored. In 1864 they ceded large tracts of land to the government and settled on a reservation.
- Kleist, Heinrich Bernt Wilhelm von.**—(1777-1811.) A German dramatist of great talent and greater promise. He died by suicide at the age of 34 years.
- Klondike.**—A river in the Northwest Territory, Canada, emptying into the Yukon at Dawson, Alaska. The name is also applied to the region through which it flows, famous for its gold-mines.
- Klopstock, Friedrich Gottlieb.**—(1724-1803.) A German poet and theologian.
- Kneller, Sir Godfrey.**—(1646-1723.) One of the first portrait-painters of his day. He was German by birth, but worked mostly in England, being patronized by Charles II. and other sovereigns.
- Knight, Charles.**—(1791-1873.) An English publisher, editor, and author.
- Knight, James.**—An agent of the Hudson Bay Company. In 1818 he sailed in search of the fabled Straits of Anian and was not heard of again. Nearly 50 years later the wreck of his ships was discovered at Marble Island by a whaling party.
- Knight, Richard Payne.**—(1750-1824.) An English archæologist. His valuable collection of coins, etc., were left to the British Museum.
- Knights of Labor.**—A secret order of working men, founded by Uriah S. Stevens, in Philadelphia, in 1869, and formally organized as a national body in 1871. Not until 1881 was the name of the order made public, and at that time nearly all the trades were represented. The knights are governed by a general executive board, presided over by a general master-workman, who has power to order strikes and boycotts. The object of the order is the amelioration of the condition of the working people and their protection from the aggressions of capital.
- Knots and Splices.**—2152.
- Knowledge into Power, Transmuting.**—4667.
- Knowles, James Sheridan.**—(1784-1862.) A British playwright, prominent in his day.
- Know-nothings, or Know-nothing Party.**—A name applied to an American party which advocated the control of the Government by native citizens. Its members received the name of "Know-nothings" because from the time of the organization of the party in 1853 till 1855 it was a secret fraternity, and when questioned as to its objects or workings, its members professed to know nothing about it. The party was powerful for several years. In 1856 it nominated Millard Fillmore for the presidency. In 1855 a society called the "Know-somethings" was formed to oppose the "Know-nothings." Both disappeared in a few years and their adherents were merged into other parties.
- Know-somethings.**—A short-lived political sect, organized in 1855 in opposition to the Know-nothings. (See KNOW-NOTHINGS.)
- Knox, John.**—(1505-1572.) A famous Scottish preacher, statesman, and reformer. He organized the Presbyterian church of Scotland, and it was largely through his influence that that country became Protestant.
- Knoxville.**—Capital of Knox County, commercial and industrial center of East Tennessee.

- Burnside's army was here besieged unsuccessfully by the Confederates under Longstreet in 1863.
- Koch, Robert.**—Born in 1843. A German physician who became famous by his discovery of the bacilli of tuberculosis and of cholera.
- Kock, Charles Paul de.**—(1794-1871.) A French writer and dramatist, treating especially of the lower middle-class life of Paris.
- Kohl, Johann Georg.**—(1808-78.) A German traveler and author. He wrote several works on American geography and exploration.
- Kokomo.**—A city in the "gas belt" of Indiana, about 50 miles north of Indianapolis.
- Kongo Free State.**—A state in western central Africa, drained by the Kongo River. The state was constituted by the Berlin conference in 1885, with Leopold III. as the sovereign. By his will, dated Aug. 2, 1889, he bequeathed all his sovereign rights to Belgium. By a convention of 1890 he gave Belgium the right to annex the state after ten years. The chief exports are ivory, nuts, rubber, coffee, etc. Area estimated at 900,000 sq. miles; population about 14,000,000.
- Konrad von Würzburg.**—A German poet of the burgher class, who died in 1287.
- Koran, The.**—1737.
Creation of the Earth, 1739.
Creation of Man, 1739.
Adam, 1740.
Fairyland, 1740.
Sacred Light, 1741.
Resurrection, 1742.
Bridge of Hell, 1745.
Paradise, 1746.
Rewards of the Faithful, 1747.
Sufferings in Hell, 1747.
Advice to the Faithful, 1748.
- Korea, or Corea,** known as "The Hermit Nation," a peninsula extending south of Manchuria between the Sea of Japan and the Yellow Sea. It has been independent since 1895, when it began to have intercourse with the outer world through its treaty ports. Since 1876 it has concluded treaties with Japan, China, Germany, France, Italy, Russia, Austria, Great Britain, and the United States. Its chief exports are rice, beans, and ginseng. Gold, copper, iron, and coal abound. Transportation throughout the country is still very primitive, and cultivation is backward. Confucianism and Buddhism are the chief religions. The government is an absolute monarchy, under Heui Yi, who came to the throne in 1864, and in 1897 assumed the title of emperor. The principal treaty ports are Chemulpo, Fusan, and Yuensan. Area of the country, 82,000 sq. miles; population 10½ millions. Seoul is the capital. Pop., 200,000.
- Körner** (*koér'ner*), **Karl Theodor.**—(1791-1813.) A patriotic German poet.
- Kosciuszko** (*kos-i-us'kô*), **Tadeusz.**—(1750-1817.) Polish general and patriot. He served in the American War of Independence, and in Europe, in 1794, with 20,000 regular troops and 40,000 ill-armed peasants, he resisted for months the united Russian and Prussian army of 150,000. He was overpowered and imprisoned until the accession of Emperor Paul. He figured in the Napoleonic wars.
- Kossuth, Louis.**—(1802-1894.) Patriot leader of the Hungarian revolution. In 1851 he visited England and America, where he met with enthusiastic receptions.
- Krafft, Peter.**—(1780-1856.) Noted Austrian painter.
- Kraft, Adam.**—3584.
- Krakatua.**—An active volcano on an island of the same name in the Strait of Suuda, between Java and Sunatra.
- Krapotkin (Prince), Peter.**—Born in Moscow, 1842. A Russian social and political reformer; author of many works on international topics. Although a member of the oldest Russian nobility he forfeited his family claims that he might live according to his theories.
- Kremlin, The.**—A vast building in Moscow, situated on the north bank of the river Moskva, forming the center of the city. Its walls are surmounted by eighteen towers and pierced by five gates.
- Kreutzer** (*kroitz'ser*), **Rodolphe.**—(1766-1831.) French violinist and composer. His chief work is forty "Etudes."
- Kriemhilda.**—See NIBELUNGENLIED, 1761.
- Krishna.**—The eighth *Avatar*, or incarnation of the Hindu god *Vishnu*. 1521-1532.
- Kronstadt.**—Seaport in the government of St. Petersburg, Russia, situated near the head of the Gulf of Finland. Founded by Peter the Great in 1710. Pop., about 49,000.
- Krüger, Stephanus Johannes Paulus, Hilvesum, Holland,** age 77, a Cape Colonist by birth, was a boy of eleven when his parents took part in the Great Trek, and shared during youth and early manhood in all the fierce struggles of the early Transvaal settlers with the native tribes; joined the Executive Council of the Republic under President Burgers, was head of the Provisional Government during the war with England (1881), elected President in 1883, for a term of five years, and reelected three times subsequently. The many restrictions and oppressions imposed upon the British and other Uitlanders in the Transvaal led to a Reform agitation, brought to an abrupt ending by the Jameson Raid, after which event the Pretoria Government became still more reactionary and oppressive. The sequel is fresh in everyone's memory: the Uitlanders' petition, the Bloemfontein Conference, the protracted negotiations, the ultimatum of October 9, 1889, the many months' war, and the flight of the deposed President to Europe. Krüger is a man of great though restricted power. Sincerely pious, he belongs to the Dopper Church, the straightest sect of Dutch Calvinists, the Old Testament being his single guide to faith and practice; his state resembled that of a judge in ancient Israel rather than of a modern ruler; wily and tortuous in diplomacy, with a keen eye to material advantage, he has retained many of the primitive characteristics of his race; in his youth a mighty man of valor, his habits retained their native simplicity and uncouthness.

Krupp, Alfred.—(1812-1887.) Famous German steel gun manufacturer. He was the greatest manufacturer of heavy ordnance of modern times. He discovered the method of casting steel in very large masses.

Ku-Klux Klan.—A secret organization that was formed in several of the Southern States soon after the Civil War. Its exact origin was never disclosed. It was charged against the order that its object was to suppress the negro as a factor in politics, etc., by means of intimidation and terrorization. It was claimed that a copy of the Klan constitution was obtained, from which it was learned that their lodges were called "dens," the masters, "Cyclops," and their members "ghouls." A county was called a "province" and was governed by a "grand giant" and four "goblins." A congressional district was a "dominion," governed by a "grand Titan" and six "furies." A state was a realm, governed by a "grand dragon," and eight "hydras." The whole country was an "empire" governed by a "grand wizard" and ten "*genii*." They appeared only at night and carried banners. Their dress was a covering for the head descending over the body, holes being cut for eyes and mouth. The covering was decorated in any startling or fantastic manner. The organization outran its original plan. In many localities gross disorders and crimes

were committed by persons in disguise, who were either members of the Klan or were using the disguise and methods of the order for evil purposes. A congressional investigation followed, and President Grant, in a message, asked for legislation to suppress the order. The Ku-Klux act was passed in 1871, and the same year the President issued a proclamation on the subject. Soon thereafter the Klan dispersed and ceased to exist.

Kunchinjanga.—One of the loftiest peaks of the Himalaya Mountains, situated between Nepal and Sikhim. Height, 28,176 feet.

Kurdistan.—An extensive region of western Asia belonging to the Turkish and Persian monarchies. The country is mountainous. A great trade is carried on with Turkey and Persia, especially in horses. The popular religion is Mohammedanism. Pop., estimated, 3,000,000.

Kurile Islands.—A chain of islands in the north Pacific Ocean belonging to Japan. It extends from southern Kamchatka to the Island of Yezo, 32 in number, 19 of which were owned by Russia, who ceded them to Japan in 1875 in exchange for half of Saghalien. Area, 3,850 square miles; pop., 300.

Kyrle (*kerl*), **John.**—Born in England in 1637, and died in 1724. A benevolent and public-spirited man, known as "the Man of Ross." Pope immortalized him in his "Moral Essays."

L

Laar, or Laer, Pieter Van.—(1613?-1674.) A noted Dutch *genre*-painter.

Lablache, Luigi.—(1794-1858.) One of the greatest singers of modern times.

Labor, Department of.—The profound study of the labor question is strictly modern. More consideration has been given to it, within the last third of a century, than during any previous period in the world's history. It has awakened greater interest among the masses in the U. S. than in any other country in the world, while in England, France, and Germany it is fast becoming a question of vital political and social importance. By the act of Congress, passed June 13, 1888, the Department of Labor was created, to take the place of the Bureau of Labor, which had been established in 1884. The head of this department is called the Commissioner of Labor, and it is his duty to collect and diffuse among the people information pertaining to questions affecting labor. One of the principal matters on which he is called to report is the topic of wages. He is also expected to consider the effect of customs laws upon the currency and the agricultural interests of the U. S. On account of the increasing number and diversity of industrial interests, the annual reports of this department are among the most closely studied of any issue of the government. In response to demands of working people in various

parts of the country, almost every state in the Union has established bureaus of labor statistics.

Labor Day.—The first Monday in September has been made a holiday in thirty-six states, and by the U. S. in the Dist. of Col. It was observed first in Col. in 1887. On that day meetings for the discussion of labor questions are held and there are usually parades, picnics, and dances.

Labor Problem, A Twentieth Century View of the.—5187.

Labouchere, Henry.—Born, 1831. A noted English journalist and politician. Editor of the London weekly "Truth."

Labrador.—The name given to the continental coast of North America near Newfoundland. Area, 120,000 square miles; pop., about 5,000. It is partly under the jurisdiction of Canada and partly under that of Newfoundland.

Labrador Tea.—2892.

La Bruyère, Jean de.—(1645-1696.) A celebrated French moralist. His greatest literary work is his "Les Caractères," the ninth edition of which was in press at the time of the author's death.

Laburnum.—A small leguminous tree, *Cytisus Laburnum*, a native of the Alps, and neighboring mountains. Cultivated for the beauty of its pendulous racemes of yellow pea-shaped flowers. Also called golden-chain and bean trefoil.

Labyrinth.—From the Latin *Labyrinthus*; derived by some from Labaris, the name of an Egyp-

- tian monarch of the 12th dynasty. The name of several celebrated buildings of antiquity consisting of many chambers or passages difficult to pass through without a guide.
- Laccadives.**—A group of islands in the Indian Ocean, discovered by Vasco da Gama, 1499; about 150 miles west of the Malabar coast. Pop. 14,000; area, 744 sq. miles.
- Lacedæmon** (*las-ê-dê'mon*).—The ancient name for Laconia, and sometimes applied to Sparta.
- Lackawanna.**—A river of Pennsylvania; length, about 55 miles. Its lower valley is rich in anthracite coal.
- Laconia.**—(1) Anciently, a division of the Peloponnesus, its principal city Sparta. (2) In modern Greece, a nomarchy corresponding nearly to ancient Laconia.
- Lacroix, Paul.**—(1806-1884.) A French novelist and historical writer. He wrote under several pseudonyms.
- Lacrosse.**—2015.
- La Crosse.**—The capital of La Crosse Co., Wis.; situated on the Mississippi at the mouth of the La Crosse and Black Rivers. Its lumber trade is important. Pop. (1900), 28,895.
- Ladies Tresses, The.**—2906.
- Ladoga, Lake.**—In northwestern Russia, the largest lake in Europe. Length, 130 miles.
- Ladrone Islands, or Mariana Islands.**—A chain of islands in the North Pacific; Guahan (Guam) belongs to the United States, the remainder of the group to Germany.
- Ladybird.**—A beetle of the family *Coccinellidæ*, so called from its graceful form and delicate coloring. Also called ladybug, ladyclock, ladycow, ladyfly.
- Lady's-slipper, The.**—2905.
- Ladysmith.**—In South Africa, a small village in Natal. It was at Ladysmith that Sir George White with 20,000 British troops withstood a twelve months' siege by the Boers and was relieved by Gen. Sir Redvers Buller, March 1, 1900.
- La Farge, John.**—Born at New York, 1835. A distinguished landscape and figure painter, decorator, stained glass designer, and sculptor.
- Lafayette.**—The capital of Tippecanoe Co., Ind., a manufacturing and trading center. Pop. (1900), 18,116.
- Lafayette, Marquis de** (Marie Jean Paul Roch Yves Gilbert Motier).—(1757-1834.) A celebrated French statesman and general. In 1777 he entered the Revolutionary army in America as a volunteer, with the rank of maj.-gen.; served at Brandywine, Monmouth, and Yorktown; in 1781, was present at the surrender of Cornwallis. He was a member of the Assembly of Notables and of the States-General in France; was commander-in-chief of the national guard, and served in the war between France and Austria (1792). He revisited America (1824-25), and was everywhere greeted with the greatest popular enthusiasm. In the French Revolution of 1830, he commanded the National Guard and was influential in placing Louis Philippe upon the throne. The name is also written La Fayette.
- La Fontaine, Jean de.**—(1621-1695.) A celebrated French writer of fables.
- Lagos.**—(1) A seaport of Portugal; its bay is the scene of the defeat of the French by the British, in 1759. (2) A British settlement on the west coast of Africa; an important trade center. Area, 1,500 sq. miles; pop., 2,000,000.
- Lahore.**—A city of India, capital of the Punjab, also of the division and district of Lahore. Pop. of the city, 180,000.
- Lake Borgne (L.a.), Battle of.**—The British army, repulsed at Baltimore, retired to the island of Jamaica. It was here reinforced by a sufficient number to make a total of above 7,000 men, and sailed from Jamaica, Nov. 26, 1814, in Admiral Cochran's ships, with the intention of capturing New Orleans, and thus securing possession of the Mississippi River and the Territory of Louisiana. Early in December, Daniel F. Patterson, commanding the naval station at New Orleans, sent Lieut. Thomas A. C. Jones with seven small vessels, mounting 23 guns and carrying 182 men, to intercept the British fleet. The British, Dec. 14, 1814, manned 60 barges with 1,200 volunteers from the fleet under Capt. Lockyer, and sent them out to destroy the American gunboats. The battle took place on Lake Borgne, and lasted about an hour. Several of the British barges were shattered and sunk, and about 300 men were killed or wounded. The American gunboats were captured, which gave the British control of Lake Borgne.
- Lake Champlain, Battle of.**—After arriving at the head of Lake Champlain, Sept. 6, 1814, Governor-general Prevost awaited the coöperation of the British fleet on the lake. Sept. 11, Capt. Downie's squadron rounded Cumberland Head. It consisted of the frigate "Confidence," brig "Linnet," sloops "Chub" and "Finch," and twelve gunboats. In Plattsburg Bay, awaiting the attack, lay the American squadron under Capt. Thomas Macdonough, then only 28 years of age. It consisted of the ships "Saratoga," brig "Eagle," schooner "Ticonderoga," sloop "Preble" and 10 gunboats. The first shot from the "Saratoga" was aimed by Macdonough, and went entirely through the flagship of the British squadron, demolishing her wheel. The battle raged two hours and twenty minutes, when every British vessel struck her colors. The British loss was more than 200, including Capt. Downie. The American loss was 110, of whom 52 were killed.
- Lake Erie, Battle of.**—In 1813 the Americans, under great difficulties, constructed a fleet of war vessels at Presque Isle, now Erie, Pa., for service on the Great Lakes. Aug. 12, 1813, the American squadron, consisting of the "Lawrence" (flagship), "Niagara," "Caledonia," "Ariel," "Somers," "Tigress," "Scorpion," "Porcupine," "Ohio," and "Trippe," manned by less than 400 officers and men, under Capt. Oliver Hazard Perry, sailed for the head of Lake Erie, in search of Barclay's British squadron of six vessels, manned by more than 500 men. Sept. 10, Perry's lookout sighted

the enemy. At ten o'clock in the morning the signal for action was run up to the masthead of the "Lawrence." It bore the words of the dying Capt. Lawrence of the "Chesapeake," "Don't give up the ship." During the action the "Lawrence" was disabled and Perry transferred his flag to the "Niagara." At 3 o'clock in the afternoon the flag of the British flagship was struck and the firing ceased. Perry sent to Gen. Harrison the famous message: "We have met the enemy and they are ours." The British loss in the action was 135, 41 of whom were killed. The Americans lost 123, 27 of whom were killed. (See PERRY, OLIVER HAZARD.)

Lake State.—A name given to Mich., which borders on Lakes Michigan, Superior, Huron, Erie, and St. Clair.

Lakewood.—A town in Ocean Co., N. J., noted as a winter resort. Pop. (1900), 3,094.

Lakshmi.—In Hindoo mythology, goddess of fortune. (See 1526.)

"**Lalla Rookh.**"—A poem by Thomas Moore, published in 1817.

Lamar, Lucius Quintus Cincinnatus.—(1825-1893.) An American jurist and politician. Appointed associate justice of the Supreme Court in 1888.

Lamartine, Alphonse Marie Louis.—(1790-1869.) Renowned French poet, who also won distinction as orator and statesman. He was elected to the Academy in 1830.

Lamb, Charles.—(1775-1834.) English poet and essayist. His works are numbered among the classics of English literature.

Lamb, Mrs. (MARTHA JOANNA READE NASH).—(1829-1893.) An historical and miscellaneous writer. She edited the "Magazine of American History" from 1883.

Lambeth Palace.—In the parish of Lambeth, London. The town residence of the Archbishop of Canterbury. It came into the hands of an early archbishop in 1197.

Lambkill, The.—2890.

Lamia.—In Greek and Roman mythology a female demon or witch who charmed children for the purpose of feeding on their blood and flesh.

Lamps, Care of.—2296.



ANTIQUE LAMP

Lancashire.—A county of northwestern England, including the cities of Liverpool and Manchester. It is chiefly celebrated for its commerce and its manufactures of textile fabrics, especially of cotton.

Lancaster.—(1) The capital of Fairfield Co., Ohio; pop. (1900), 8,991. (2) The capital of Lancaster Co., Pa.; a commercial and manufacturing

center; was state capital (1799-1812); pop. (1900), 41,459.

Lancaster, Dukes of.—

1. **HENRY.**—(1299-1361.) An English soldier and statesman, renowned as a model of knight-hood and successful in many diplomatic missions. Served, especially in Scotland and France, under Edward III., by whom he was in 1351 created duke of Lancaster.

2. **JOHN OF GAUNT.**—(1340-1399.) Fourth son of Edward III., and son-in-law of Henry, above mentioned. He succeeded by right of his wife to the duchy of Lancaster. His life was spent in fruitless wars abroad and in bickerings and political jealousies at home. Upon the accession of Richard II., his political power declined. From him three English kings were descended: Henry IV., Henry V., and Henry VI.

Lancaster, House of.—In English history, the Lancastrian kings, descendants of John of Gaunt, fourth son of Edward III., first duke of Lancaster. They were Henry IV., V., and VI. (1399-1461).

Lancaster Sound.—A channel situated about lat. 74° N., leading from Baffin's Bay westward.

Landlord and Tenant.—A landlord is one who owns real estate; a tenant is one who hires such real estate and adapts it to his own personal use for a monetary consideration, called rent. In such a bargain the tenant is liable for all taxes unless it is otherwise stated in the lease. Leases for a year or less may be verbal, but those for a longer period must be in writing and under seal. All leases should be duplicated; one to be retained by the landlord, the other by the tenant. A tenant can sublet the property so hired, or any portion of it, unless the lease expressly forbids it, but a subtenant cannot underlet because a new lease invalidates a former one.

Land of Steady Habits.—A popular name for Connecticut.

Landon, Walter Savage.—(1775-1864.) A well-known English writer of both poetry and prose.

Lands, Crown.—By the treaty of Paris in 1763, England acquired Canada and all the country west to the Mississippi River. A royal proclamation was then issued setting aside all the lands west of the organized colonies to the western limits of the British possessions as Crown lands. These lands were reserved for the use of the Indians, and the colonists were forbidden to purchase them or to make settlements upon them without the royal permission. After the Revolution each state laid claim to a portion of the Crown lands.

Lands, Public.—In 1787 public land was held at 66⅔ cents per acre and large tracts northwest of the Ohio were disposed of at that figure. Up to the year 1800, 1,500,000 acres had been sold, all within the present state of Ohio. A plan suggested by Alexander Hamilton in 1790 was then adopted, by which public land was laid out in townships 10 miles square, to be sold on credit. Many purchases were made, but collections were discouragingly slow. During the cur-

rency inflation in 1835, on account of the injurious effect of speculation in the public lands, President Jackson issued an order that nothing but gold and silver should be received in payment for them. A general preëmption law was enacted in 1841, but repealed in 1891. In 1898, 580,000,000 acres of public land remained unsold. Many grants of land have been made to states, railroad and canal companies, and individuals. Settlement upon public lands was stimulated by the homestead law of 1862, which fixed a uniform rate of \$1.25 per acre to actual settlers upon quarter sections.

Lands, Swamp.—In 1849 and 1850 Congress passed resolutions granting large tracts of land to the various states for their disposal. Agents of the states selected such land as was unfit for cultivation, and title to the same was confirmed in the states by an act approved March 3, 1857. It was estimated at the time that such lands would not exceed 21,000,000 acres. Millions more were, however, listed as swamp lands, and this led to an investigation by which gross frauds were unearthed. Under various acts, lands were given to Ala., Ark., Cal., Fla., Ill., Ind., Iowa, Ia., Mich., Minn., Miss., Mo., Ohio, Ore., and Wis. Fla. received the largest share—22,500,000 acres—and Ohio the least—117,000 acres.

Landseer, Sir Edwin Henry.—3477.

Land's End.—A promontory, the extreme southwestern point of England.

Land Surveying.—An important application of mathematics to the measurement of an area of land, whether small or large. It requires a thorough acquaintance with geometry, trigonometry, and the theory and use of the instruments employed for the determination of angles.

Lang, Andrew.—Born, 1844. A noted Scottish writer.

Langland, or Langley, William.—(About 1330-1400.) An English author of whose life but little is known. "Vision of Piers Plowman" is his chief work.

Langtry, Mrs. (LILY LE BRETON).—Born, 1852. An English actress who first won attention through her personal beauty.

Language.—3007.

- The Sources of English, 3010.
- The Anglo-Saxon Element, 3013.
- The Celtic Element, 3014.
- The Latin Element, 3015.
- The Norse Element, 3017.
- The Greek Element, 3018.
- Other Foreign Elements, 3019.
- Americanisms, 3020.
- The Influence of the Bible, 3021.

Language of Flowers, The.—2369.

Languages Spoken in Europe.—There are 587 different languages spoken in Europe, though philologists look upon numbers of these as merely variations or dialects of about fifty distinct languages which they credit Europe with possessing. The number of persons speaking the seven principal European languages in 1801 and 1890 is as follows:—

	1801.	1890.
English.	20,520,000	111,100,000
French.	31,450,000	51,200,000

	1801.	1890.
German.	30,320,000	75,200,000
Russian.	30,770,000	75,000,000
Spanish.	26,190,000	42,800,000
Italian.	15,070,000	33,400,000
Portuguese.	7,480,000	13,000,000

The majority of the languages of Europe are derived from the Indo-European or Aryan, the Teutonic branch including German, English, Dutch, Flemish, Swedish, Norwegian, and Danish; the Slav branch including Russian, Polish, Czech, Slovak, Serb, Croat, Slovenian, and Bulgarian; the Celtic including Welsh, Breton, Irish, Gaelic, Celtic, and Manx; the Romance including French, Italian, Spanish, Portuguese, and Rumanian. The non-Aryan languages are those of the Magyars, Finns, Tartars, Turks, Circassians, and Maltese.

Languedoc.—An ancient government of southern France. Capital, Toulouse.

Lanier, Sidney.—(1842-1881.) An American poet, critic, and man of letters.

Lansdowne, Marquis of.—Born, 1845. An eminent English politician and statesman.

Lansing.—The capital city of Mich., and seat of the State Agricultural College. Pop. (1900), 16,485.

Lansingburg.—A city on the Hudson River in N. Y., noted for its brush manufactures. Pop. (1900), 12,595.

"Laocoon."—A famous antique group in the Vatican at Rome. (See 3,541.)

Laodicea.—A city of ancient Phrygia, near the river Lycas, so called after Laodicea, queen of Antiochus Theos, its founder. It was built on the site of an older town named Diospolis; destroyed by an earthquake during the reign of Tiberius; captured by the Turks in 1255; again destroyed in 1422 and is now a heap of ruins. Art and science flourished in Laodicea and it was the seat of a famous medical school.

Laomedon.—In Greek legend the son of Illus and Eurydice and father of Priam.

La Paz.—In Mexico, a seaport of Lower California.

Lapithæ.—A people of Thessaly supposed to be the descendants of Lapithes, son of Apollo, celebrated for their wars with the Centaurs. The word is frequently used in books on Greek art, the subject of Lapithæ in combat with Centaurs being a favorite subject of Greek artists.

Lapland.—The extreme northern part of Norway, Sweden, Finland, and Archangel, Russia. Its inhabitants are mainly Lapps, the people from which the country takes its name.

La Plata.—The most important port of the Argentine Republic, and capital of the province of Buenos Ayres.

La Porte.—The capital of La Porte Co., Ind. Pop. (1900), 7,113.

Lapwing.—A plover-like bird with four toes, a crest, and lustrous plumage, belonging to the genus *Vanellus* and family *Charadriidæ*. The bird's name refers to its irregular mode of flight. The best-known specimen is the *V. cristatus*, a common European bird, also called Pewit, from its cry.

Larch, The.—2862.

- Larcom, Lucy.**—(1826-1893.) An American poetess and story-writer; editor of "Our Young Folks" (1866-74).
- Lares, Manes, and Penates.**—The family or household gods of ancient Rome. They were usually kept on the hearth, but sometimes in a shrine, where they received daily worship from the family which they protected. The public lares were protectors of the state and as such had temples consecrated to their worship.
- Large-toothed Aspen, The.**—See **POPLAR**, 2831.
- Lark, The.**—See **SKYLARK**, 2561.
- Larrabee, William Clark, LL.D.**—(1802-1859.) American educator, author, and divine.
- La Salle.**—A city of La Salle Co., Ill., on the Illinois River. Pop. (1900), 10,446.
- La Salle, Robert Cavalier, Sieur de.**—(1643-1687.) A famous French explorer, noted for his expeditions to the New World.
- Lassen, Eduard.**—Born, 1830. A noted Belgian composer; author of a number of operas, but best known by his songs.
- Lateran.**—A palace of Rome, named from the family to which it first belonged (Lateranus). The present building dates from the 16th century; such part of the old palace as remains dates from the 3d century. It was taken by Nero from the last owner of the Lateranus family.
- Lathrop, Francis.**—Born, 1849. An American portrait and decorative painter.
- Lathrop, George Parsons.**—(1851-1898.) A journalist and miscellaneous writer; son-in-law of Hawthorne.
- Lath Work.**—The standard size of laths is 4 feet long, 1½ inches wide, and ⅜ of an inch thick. They are sold in bunches containing 50 each. One bunch will cover about 3 square yards of wall space. Lathing is measured by the square yard, one-half of the surface of openings being deducted.
- Latimer, Hugh.**—(1485(?)-1555.) A celebrated English reformer and prelate; burned at the stake.
- Latimer Case.**—The first of a series of fugitive slave trials which took place in Boston. George Latimer was seized in 1842, without a warrant, and was kept in custody of the city jailer awaiting evidence against him. A writ of *habeas corpus* was denied. A writ of personal replevin securing trial by jury was also denied, and in consequence of the indignation aroused by this case, the legislature in 1843 passed an act forbidding state officers to aid in the capture of fugitive slaves, and forbidding the use of state jails for their imprisonment. The penalty for violation of the law was a fine not exceeding \$1,000, or imprisonment not exceeding one year.
- Latin Element in English, The.**—3015.
- Latin Fables.**—1373.
- Laud, William.**—(1573-1645.) A celebrated English prelate, archbishop of Canterbury. Impeached by the Commons, 1640, and executed on Tower Hill, London.
- Launcelot.**—See **ARTHURIAN LEGEND**, 1787.
- Laundry, The.**—2197.
- Laurel.**—2890.
- Laurel Magnolia, The.**—2815.
- Laurel Oak.**—2867.
- Laurens, Henry.**—(1724-1792.) American statesman and diplomat. He was a delegate to Congress (1776); was president of Congress (1777-8); and was peace commissioner at Paris in 1782.
- Laurier, Sir Wilfrid.**—Born, 1841. A distinguished Canadian statesman and premier.
- Lausanne.**—In Switzerland, the capital of the canton of Vaud; a noted educational center, and has a fine cathedral.
- Law, The Young Man in the.**—4978.
- Law as a Part of Business Education.**—4985.
- Lawn Hockey.**—2077.
- Lawn Tennis.**—2021.

LAW OF BUSINESS, THE

CONTROVERSIES OF BUSINESS GROW OUT OF SIMPLE AFFAIRS — AGREEMENTS SHOULD BE PUT IN WRITING AND DATED — HUSBANDS AND WIVES CANNOT BE WITNESSES FOR EACH OTHER — WILLS SHOULD BE WRITTEN IN PLAIN, SIMPLE LANGUAGE — POWERS OF ATTORNEY — CARE IN PREPARATION OF BUSINESS PAPERS — THE LAWS OF BUSINESS — STATUTE OF FRAUDS AND STATUTE OF LIMITATIONS — MINORS UNDER THE LAW — NECESSITY OF KNOWING AUTHORITY OF AGENTS BEFORE TRANSACTING BUSINESS — LAW FOR DESCENT OF REAL ESTATE — THE ORPHAN'S COURT — PERSONAL RANCOR IN LAWSUITS DEPRECATED BY ATTORNEYS — ARBITRATING LAWSUITS.

PROBABLY the first thing that strongly impresses a woman new to business is the frequency with which simple matters, plainly understood at the time they were talked about, turn out in the end to be neither simple nor understood. Such a woman is likely to be surprised that there should afterward be any question about the matter, and almost sure to be indignant that her recollection or understanding is dis-

puted by the other party. If she only knew, this is her opportunity for a display of that sweet reasonableness which is at once the grace of humanity and the salt and savor of the law. For a woman who has, or is likely to have, business to transact, should learn, in the beginning, that the controversies of business life grow largely out of affairs so easy to comprehend, and so quickly agreed upon, that neither speech nor memory is greatly burdened with them at the time they are supposed to become fixed or settled. A difficult or complex matter is almost sure, at some stage of its discussion, to become the subject of a written instrument, whether a letter, a memorandum, or a formal statement. But the little things of business life, as they are assumed to be at the time, are put off with mere word of mouth agreements, subject to all the risks of defective speech and defective memory. An oral agreement between two persons of legal capacity is, in law, binding upon both; but the law looks beyond the mere words proved to be used, to see if the minds of the parties met, as well as their tongues. For if the mind of one party meant one thing, and the mind of the other meant something else, the supposed unity of speech goes for nothing. A lot owner and a builder may orally agree upon the full interior details of a three-story dwelling; but if, all of the time, the mind of the owner was upon an opulent stone front, and that of the builder upon a modest brick structure, there never was an agreement to build the house for the price agreed. In such a case, the owner must be content with a brick front, or pay the greater value of a stone front.



The safe rule of business conduct is to put into writing any agreement or understanding not immediately to be executed. The writing need not be formal in arrangement or language. For most of the purposes of business life, a pencil memorandum, in common, every-day language, is as good as anything. But it should be signed by the parties, and every written paper should be dated. A long chapter might be written upon the importance of dating every piece of business writing, whatever its character or form.

A hastily written signature may afterward become doubtful to the writer of it, or to those familiar with his handwriting. Wherefore, every signed business paper amounting to an agreement to do, or not do, something, should, when convenient, bear also the signature of at least one witness. The witness need not see the paper signed; it is enough if, at any time after the signing, the parties or the party against whom the paper is intended as a safeguard, acknowledge or acknowledges that they, or he, or she, executed the paper. The witness, identifying his own signature, proves the genuineness of the paper, and the contents of the paper prove the agreement.

It happens sometimes, by accident, oversight, mistake, or fraud, that a written and signed paper does not express the true intention of the signer. As an agreement consists in the mutual agreement of the parties—that is, in the coming together of their minds at the same time upon the same subject—the law, upon due proof, will make the paper read as it ought to read.

In view of this long discourse, it is almost unnecessary to say a word upon the advisability of preserving all business writings for at least three or four years after they have apparently ceased to have any importance. A very common experience of business life is to suddenly discover the value of a writing after it has gone to the wastebasket as useless.

After all, a great proportion of matters of business must unavoidably rest upon merely oral communications between the parties concerned. If the parties subsequently disagree as to what their agreement was, no great harm is done so long as they do not waste time and money in litigation over the disputed agreement. In law, and in

the absence of an agreement, nobody can claim, or be made liable for, more than the fair, current value of the thing supplied or the service performed. Written agreements have a special importance where a married woman is concerned. For in a dispute with an outside party over an oral agreement, she cannot be a witness for her husband, nor he for her; and unless his or her testimony is strongly supported by circumstances that sustain the testimony, the contrary testimony of the other party may destroy the efficacy of the testimony given by the husband; or by the wife, if the case be her own. A serious mistake often made by persons unused to important matters of business, is to destroy some memorandum hastily or roughly written, perhaps on a ragged or scrappy bit of paper, after replacing it by a carefully written substitute on a fresh sheet of paper. But the destroyed paper was the original writing, and its destruction tends to cast doubt upon the integrity or the accuracy of the copy or substitute.

All that has now been said concerning writings and agreements is to be understood as applying to business matters and to transactions of every kind, without repetition hereinafter.

That even an experienced woman of business should personally draw up deeds of real estate, wills, building contracts, partnership agreements, statements of complex accounts, papers to be used in court proceedings, or other documents requiring expert knowledge or technical arrangement or expression, is not to be expected, and hardly to be desired. But any intelligent woman who can write, can put into writing a plain, informal statement of anything she wishes or that she agrees to do, or to have done, or wishes to have somebody else do or not do, or agree upon, and such a writing, properly signed, or otherwise afterward proved, will usually enable the proper court to give effect to the intention of the writing. But here a special caution is needed respecting writings intended to operate as wills.

A will does not take effect until the person who made it is dead, and, therefore, unable to amend or alter it. Very often, the contents of a will do not become known to others until after the death of the maker. Courts are very liberal in giving effect to wills, for the reason that the makers have passed beyond self-help or help from others. But no court can give effect to a will that directs an unlawful or impossible disposition of property, or that does not conform to the formalities required by the law of the place where the will is to operate, or which is so uncertain that the true intention of the maker is left in doubt. Yet a lawfully executed will is good as to those provisions of it that can be understood and lawfully effected, though other parts may fail because of incurable defects.

When there is both time and opportunity, a will should be written in language so full as to leave no doubt of its meaning. It should be dated, and should be signed by the maker. If unable, or too weak, to write, the maker can sign by touching the pen with which another person makes a cross mark for the signature. Not less than three persons should sign a statement written below the will, to the effect that the maker declared the foregoing writing to be his or her last will and testament, in testimony whereof the witness has signed the statement in presence of the maker. Against the maker's signature should be a seal of some kind, as a wafer; or, failing that, a small piece of paper gummed to the written sheet; or, failing that, a scroll made on the sheet with pen and ink. In case all of these described formalities cannot be effected, they should be followed as far and as closely as possible.

Wills often have many antiquated, fanciful, and wasteful beginnings. A good and sufficient beginning may be like this—*I, Mrs. Mary F. Smith, of Auburn, in the State of New York, do make this my last will and testament, this fourteenth day of October, 1902.* All that follows, down to the signature and seal, may be strictly devoted to business.

When a will apparently favors or disfavors some beneficiary, it is well to make a short statement of the reason for the discrimination.

Wills often fail because the maker has sought to control the disposition or management of the property for too long a time, or has sought to have it go this way or that way, according to a multitude of things that may never happen, or has sought to tie up the property for an excessive or indefinite time, in order that it may greatly increase, and ultimately go to persons unborn. When the maker of a will has arranged it according to living persons, and their children — born or yet to be born — he or she has done all that duty or affection requires, and about all that can be safely attempted. It is also unwise to fence the gifts of a will about with unusual or overstrict conditions. In the eye of the law, this world and its belongings are for the living, and the dead are not permitted to inflict injury or tyranny upon it.

Connected with the subject of wills, is the practice of writing in the pass book of a savings bank a direction to pay the amount of the deposit to a particular person, in case of the death of the holder. Such a writing is either a bank check, in which case it is revoked by the death of the maker, or it is a will, in which case it must conform to the law of wills as to execution and subsequent proof. If, in expectation of death, the owner of the pass book makes a gift and delivery of it, such gift and delivery will pass a good title to the deposit without any writing; but if a writing be put in a book, it should mention the gift and delivery, and the expectation of death then entertained by the giver.

Any other personal property may be given and delivered in the same way, and the delivery may consist in telling the beneficiary where the article is, and in authorizing him or her to take possession of it either immediately or when the expected death occurs. The recovery of the giver from the supposed mortal sickness revokes all such gifts.

Promissory notes are familiar by sight to everybody brought into contact with business, and blank notes are among the commonest of printed forms; so that but little needs to be said about them. If the person who is named as the beneficiary of one wishes to pass it to another owner, he writes his name on the back, which is called endorsing it. That makes him responsible for its payment at maturity, if the maker fails to pay and the endorser is promptly notified. But the holder of a note who endorses it only to transfer the title to it, may escape liability for its nonpayment by writing, before or after his signature on the back, the words "Without Recourse." When a promissory note does not state any time at which it is to be paid, it is due from the moment of its delivery by the maker.

Sometimes the maker of a note does not wish it to be "negotiable"; that is, capable of being transferred from one person to another by delivery. In that case, he makes it payable simply to John Smith, instead of to "John Smith or order," or to "the order of John Smith." By so making it non-negotiable, he can set up against any holder of it the same objections or defenses against payment that he could have raised against John Smith, if the latter had retained the ownership of it.

When a mere written acknowledgment of a debt is all that a creditor desires or needs, the debtor can give it this form: *I. O. U. Fifty Dollars, November 17, 1901.* To this brief acknowledgment he signs his name, and then he owes the money to whoever is in lawful possession of the so-called I. O. U. This is an improvement upon the promissory note — for the debtor. There is no promise to pay the debt, nor any time or place mentioned for payment, nor any admission that the debt is based upon value received. The paper is presumptive evidence of the debt, and puts upon the signer the burden of proving that he does not owe the debt, if he disputes it.

As to all business writings, it may be remarked that every such paper should show the place where it originated; the date when written; the person from whom it proceeds; the character in which he issues it — whether personal or official, in his own

right, or as an agent, attorney, or trustee, for another; his customary address or location; the name, quality, and location, of the person to whom issued or for whom intended, and the object or occasion for making it. Some of these particulars must, of necessity, be expressly stated, while others may be plainly inferred from the whole contents of the paper, and need not be expressly mentioned. These remarks apply to a brief, informal memorandum, to a formally addressed and arranged letter, and so upward in the scale to a legal deed of conveyance.

A word may be added regarding the signature of papers. Some writings require to be subscribed—that is, signed at the end, and it is customary and advisable so to sign all papers; but even a promissory note that reads *I, John Smith, promise to pay*, is legally signed if John Smith wrote his name, and a signature by initials is good unless the law otherwise provides.

Mistakes are sometimes made in the given names of persons, or in the initials of their given names, or in the spelling of their surnames. Such mistakes may cause trouble or inconvenience, but are of no other consequence if the person meant can be identified beyond reasonable doubt, for names are but earmarks in law, to distinguish one person from another. If Mary Bowen is called Mary Brown in a check, draft, or note, she first endorses it as Mary Brown, and then in her true name. If in a deed that has been recorded and not corrected, then in her own subsequent deed she may be described as Mary Bowen, sometimes called Mary Brown.

So much has been said in favor of the use of printed forms for business purposes, that a short list of the blanks most likely to be needed for business of one sort or another, is sure to be acceptable. In small towns or villages, where they are not kept in stock, the local booksellers can procure them as needed.

FORMS RELATING TO REAL ESTATE.—Bill of sale; builder's agreement; builder's bond, with surety, for execution of agreement; deed, full title, or quit claim; leases, monthly or by the year, or term of years; mining deed; mortgage; notice to tenant to quit; promissory note, secured by mortgage, and same with separate notes for interest; release of mortgage.

FORMS RELATING TO PERSONAL PROPERTY.—Assignment of interest in patent or invention; bill of sale; mortgage of household furniture, store fixtures, stock, farm utensils, or other movable property; promissory notes, unsecured, or secured by mortgage of movable property or by deposit of securities; release of mortgage.

GENERAL FORMS, APPLICABLE TO REAL ESTATE, PERSONAL PROPERTY, OR TO MERE PERSONAL RELATIONS OR RESPONSIBILITY.—Affidavit, agreement, assignment, bill of sale, bond, employee's bond, power of attorney, receipt, will.

A collection of these forms, fastened together and kept at hand, would be a ready aid to business required to be put into writing, and a study of any of the forms, in such a way as to bring before the mind each and all of its provisions, would certainly sharpen the business faculty.

There is a class of books that may be designated under the title of "Every Man His Own Lawyer," that are more useful to lawyers than to others; but which have their usefulness in business, so long as the inexperienced do not attempt to be exclusively their own lawyers in matters of importance or complexity. One of these publications stands so far above the rest as to warrant a particular mention of it. That is the little book entitled "The Laws of Business," by the late Professor Parsons, one of the great names in American jurisprudence.

Things, as well as persons, are under the law; wherefore, in buying lands, or stocks, or bonds, for an investment, or in lending upon the security of them, it is always needful to know the leading provisions of the law that applies to them. If this be disregarded, loss or vexation may unexpectedly follow. For example, to lend money at

seven per cent., where the legal rate is limited to six per cent., may cause the loss of all the interest and, in some places, of the whole sum lent. This is but one of many possible illustrations of the necessity of doing things according to law, as well as according to the agreement of the parties. An express agreement is a special law made by the parties for themselves, but their special law must be made within the limits of the general law and must not pass its bounds. The general law expresses the public will and defines the public interest, and when private and public policy conflict, the latter overrides the former. Every business transaction is legally assumed to be founded upon a contract, but in fact, the majority of business transactions occur without any express or prior agreement. In every such case, the law infers an agreement to pay the reasonable value of services rendered or of supplies furnished, and because of this sensible view of the law, the world is enabled to live and to move in a rational and diligent way.

Two notable laws that bear directly on business relations are those respectively known as the Statute of Frauds and the Statute of Limitations. The object of the first is to lessen misunderstandings and perjuries by requiring all agreements affecting real estate, or personal property exceeding fifty dollars in value, to be put into some form of writing; though as to personal property, the payment of money to bind the bargain, or the delivery and acceptance of the goods, or part of the goods, dispenses with the writing. The object of the second law is to compel the bringing of lawsuits within such reasonable time after the occasion for bringing them arises that the defendants may not be put to unjust inconvenience or loss by the failure of memory, the death of witnesses, and the disappearance or destruction of papers. These statutes have been in operation in both England and the United States for some three centuries, and have so woven themselves into the web of business life that persons who have never heard their names, or who are unacquainted with their provisions, in transacting business unconsciously conform to their requirements. The popular expectancy that a business agreement, not to be instantly executed, is to be put into writing, as a matter of course, arises not so much from the universality of writing in these days, as from the long-molded habit resulting from the Statute of Frauds.

So, when a client consults a lawyer about bringing suit on a matter some ten years old or thereabouts, and is advised that the case is barred,—that the claimant has waited too long,—there is less surprise than disappointment felt; because for three centuries, nearly, the Statute of Limitations has been at work; and, though the client may have had no prior occasion for direct knowledge of it, he has known and for the time forgotten, of cases of others that, like his own, had become barred by lapse of time.

Both statutes have been much amended, by additions needed to fit them to modern and existing conditions of life; but these are nothing by comparison with the indirect alterations made by courts, in ostensibly applying the statutes to the cases before them. Let us suppose that a grocer, having an old and profitable stand, but whose business has outgrown its accommodations, makes an oral agreement with the owner of the next door premises for a long lease of them. The parties have confidence in each other; the grocer is in a hurry, and, with the consent of the other party, proceeds to pull down the partition and to fit up and stock the annexed premises. Then the owner, thinking that he has the grocer shackled, tells the latter that he has changed his mind about leasing the premises to him upon the terms agreed, and offers him the alternative of getting out or of paying an extortionate price for a new agreement. According to the language of the



Statute of Frauds, the grocer is without remedy. He knows that the law required him to take a written agreement from his tormentor, and he knows that a court has no power to change or to ignore the law. But the court knows more than the grocer. Though the king and Parliament, that made the law, have been dead for centuries, and in their lifetime never uttered a word outside of the statute itself, the judge gravely declares this to be a case to which they did not intend the statute to apply. So the grocer gets his lease; the owner gets his proper rent, but pays the cost of the lawsuit; the statute continues to flourish; the court has administered the law without presuming to touch a hair of it, and one more is added to the innumerable cases "outside the statute."

There has been the like experience with the Statute of Limitations. A new promise to pay an old debt, or a payment on account of an old debt, or fraud practised by the debtor upon the creditor, are among the more familiar circumstances that take a case "out of the statute." In the popular estimation, it is dishonorable to plead the statute against an otherwise honest debt, and this is true in many cases. For a long time the popular view was shared by both English and American judges, who grasped at the most trivial circumstances as sufficient to take a case "out of the statute" and to allow it to be heard on its merits. But in 1828, that great jurist, Justice Story, in delivering a judgment of the United States Supreme Court, spoke strongly in favor of the law as a statute of repose, a wise and beneficial law, intended to encourage speedy settlements of accounts, and to afford security against stale demands, the merits of which had become lost to knowledge by lapse of time. If a dilatory creditor sometimes lost an honest claim, it was entirely his own fault; but there was no fault in the greater number of innocent men, for whom the statute stood as a shield against fraud and perjury. This view of the law is that now held by the courts of both countries.

Except in a very plain case, it is impracticable for an inexperienced person to judge whether a particular matter does or does not come under the statute of frauds or of limitations. The question is one for a lawyer, and he is not likely to give an off-hand opinion about it. All that can be said in the way of general usefulness is that the two statutes are in force; that the tendency of the courts is to enforce them, and that in a doubtful matter, the case is most likely to be held as within the statute, and not one of the exceptions to it.

Some classes of people are under legal disability to enter into business engagements that bind them, though the other party to such a transaction may be bound. Minors are the most numerous class. In some places full age is attained at eighteen; in others not until twenty-one years. A person may be of full age for some purposes and not for other purposes. In some places, marriage hastens the attainment of full age, and in others it does not. In transacting important business, anywhere, a prime requisite is to know the law of the place.

For that which is necessary to support health or education, a minor can make a binding agreement, but as to other things, he may confirm or repudiate, as he pleases, after he becomes of age.

Married women are under the same disability as are minors, except when dealing with their own separate property, as to which the law now places them on the footing of single women.

Insane persons, including idiots, are of course under disability, and as insanity is much on the increase, this is a matter that persons transacting important business must always have in mind. The most difficult case is that of an insane person who experiences intervals of sanity, because what is done in such intervals is good in law.

Rights of married women, minors, and absent persons, which otherwise would be barred by the law of limitations, are preserved for them till the wives become single,

the minors of full age, and the absent persons have returned; and then, for the first time, the term of three, five, or more, years granted by the law for the bringing of actions begins to run. When it has begun to run it continues, even if a widow remarries; if a girl, lately become of age, takes a husband; or if the returned absentee goes away again.

Adverse possession of real estate for twenty years usually gives a good title to the possessor. But if the rival claimant out of possession be a married woman, and she dies in wedlock, leaving as her heir a daughter under age, who marries during minority, and who dies and leaves a minor as her heir, the party in possession may be lawfully attached half a century or more after his title seems to be good. This would be a rare and an extreme case, but such cases do now and then occur.

The title and the possession of real or personal property is often put in the care of a trustee, for the benefit of some other person, in whom, for one cause or another, it is not practicable, or safe, or desirable, to put the direct title or possession. So long as the trustee is diligent and faithful, the beneficiary's interests are in a good state, and the law is very sharp in holding trustees to their duties. Nevertheless, there are many and serious losses from negligence or abuse of trusts. Where the property put in trust is of considerable value, the best trustee to choose is one of the large financial corporations known as trust companies. They are legally empowered to act as trustee, administrator or executor, and, as a rule, they are financially sounder, and better able to take care of a trust or an estate, than are individuals. They are especially safe and useful for women having property interests important to themselves, or intrinsically large. Their business is so organized and conducted that they can, and will, look after small properties and large properties with equal diligence and success, and, as much of their business comes from the property interests of women and children, it is particularly agreeable for women to do business with them. "Safety, speed, and comfort" is a railway, and steamship, motto that could readily be applied to business done with trust companies. They are at once trustees, agents, attorneys, administrators, executors, guardians, savings banks, deposits banks, storage warehousemen; real estate, mortgage, stock and bond investors for customers, and a multitude of other things in a financial and business way. Some people who live on the income of investments, put their whole capital in charge of a trust company, and cheerfully pay the reasonable charges for the safety, convenience, and profit of such an arrangement.

The business transactions of life are conducted to an astonishing extent by or with persons who, because they do not act for themselves, are of necessity, and in law, agents. This is true of the domestic servant who goes to the grocery for supplies to be charged to her employer, of the saleswoman or clerk in a store or commercial house, of the conductor of a railway train, of the head of an executive department at the national capital, and of such a multitude of persons and corporations, in such a variety of circumstances, that the human mind could not conceive or contain them all. And in the business experiences of a life, the losses and disappointments due to the failure of principals to confirm or to execute the agreements or arrangements of their agents, make a large and somber figure. Hence the supreme importance, in both great and little things, of what is now to be stated; namely, that whoever deals with another person, knowing or having reasonable cause to know that person to be acting for somebody else, whether an individual, an association, a corporation, or a government, is legally bound to ascertain the nature and extent of the authority of that agent before closing with him. No individual, association, corporation, or government, can always act



directly for himself or itself; therefore, he or it must sometimes act through agents. It is impossible that he or it could anticipate all that an agent may say or do, but it is possible for a person dealing with that agent to find out what the principal has authorized him to say or to do in the particular matter. Wherefore, the law, which is nothing more than common sense formalized, puts upon the proper party the responsibility of inquiring into that which could not be known without inquiry. Of course, if the agent chooses to act as a principal, and is financially good, the real principal may be disregarded.

When the owner of real estate dies without making a will, the law of the place comes into operation, and directs how and to whom the title and possession shall descend. The law of descent is not uniform throughout the United States; but, in general, it provides that one-third shall go to the widow for life, and the rest in equal shares to children; the children of any deceased child taking what would have been their parent's share. If the lately deceased owner of the real estate was a wife, and children have been born of the marriage, then the husband gets the whole for his life, after which it goes equally to the children.

Where there are no children, or descendants of children, the real estate goes to the brothers and sisters of the last owner, and to their descendants. If that line of inheritance fails, the law goes up to the father of the last owner and gives the property to his brothers and sisters and to their descendants. But if the real estate came to the last owner through his or her mother's side, then it goes to the brothers and sisters of the mother and to their descendants.

The law for the descent of real estate not disposed of by will is so voluminous that no useful purpose could be served by following it out here. The principle of the law is to give the estate to those of the blood of the last owner; the downward line having precedence of the upward; those nearest being preferred to those more distantly connected, and those tracing their connection through fathers being preferred to those tracing through mothers, except when the estate came through the mother's line. On a total failure of blood relationship, and when there is no surviving husband or wife, the property goes to the state.

Every state and territory of the Union has a perfectly just and reasonable law for the disposition of real estate not disposed of by will of the last owner. So that if the owner of real estate has as many as three or four children, including the descendants of deceased children, and does not wish to give husband, widow, or any child any more than as above stated in describing the general law, then there is no necessity for a will of real estate.

The law everywhere, too, provides for a just and reasonable distribution of personal property not disposed of by will. The logical cause for making a will is the desire, the expediency, or the justice, of setting the law aside in the particular case, in order to make a special arrangement better suited to the circumstances of the case, either as they actually exist at the time the will is made, or as it is reasonably possible they may exist at the time the maker of the will dies.

In the case of real estate not disposed of by will, the title and the right to possession pass instantly, by mere force of law, without any special proceedings, to those entitled, called the heirs at law. But devisees, being those to whom real estate is given by will, must establish the will in the court charged with the administration of estates of deceased persons. The same court also has charge of the interests of orphans under age, appointing, supervising, and controlling the guardians of their person and property. The proceedings in these courts are usually less technical than in other courts, and the judges, and clerks, of such courts, having widows and orphans for their habitual suitors, are accustomed to do much more of the work in a case than is customary in other

courts, where lawyers are habitually employed. Under favoring circumstances, it is quite possible for an intelligent woman, with the customary aid of the court officials, to carry through the settlement of a large estate; but, as a general rule, it is better to have a lawyer for any estate amounting to as much as three thousand dollars. So strong is the feeling that widows and orphans are special objects of consideration, that lawyers of good standing usually charge less in an administration case than in other kinds of professional business. True, many estates are diminished, and even wasted, in the probate courts — as such courts are called — but that is because of the hatreds and contentions of the principal parties. The popular idea that lawyers are fomenters of litigation is known to be untrue by the lawyers themselves. Their experience of the delays, uncertainties, and expenses, of legal contentions, puts them in a frame of mind to avoid or to shorten litigation; beside which, the more profitable part of a lawyer's business is that which is done amicably. Where nothing is to be spent on a lawsuit, he can reasonably charge more for a special service. A lawyer in good practice, and of good repute, dreads nothing more than the bitterness and ardor of a family quarrel over property. Any such quarrel, fought out strenuously to the end, is very likely to leave the lawyer with far less pay for his labor than he ought reasonably to receive. Family lawsuits are often proper means for bringing the judicial machinery of the state to a solution of uncertainties and conflicting claims that the parties could not settle among themselves with satisfaction. But when the parties are personally inflamed against one another, the lawyers in the case, like other members of the community, are shocked by the display of unnatural feeling, and they sometimes come together, behind the backs of their clients, to concert means for moderating a fury that they cannot openly control. For a lawyer to promote or encourage personal rancor in parties to a lawsuit, would be to blacklist himself with the bench and bar, and next to doing well at his business, there is nothing a lawyer so much esteems as standing well with those who know him better than any client can know him. Newspaper accounts of legal proceedings concern themselves mostly with exceptional cases, and with the personal affairs of the less worthy members of the bar, so that the public gets but a partial, and a misleading, view of the practical working of the law. Jurymen learn better, but a man with repute, talent, and leisure, enough to enlighten his fellow-citizens, shuns jury service whenever he can, and drops the whole business from his mind when a reluctant tour of jury duty is completed.

What has been said suggests a reference to the device of arbitration, as a substitute for law, in deciding controversies between parties who cannot settle their own dispute. An arbitration is quick, easy, and inexpensive, and, therefore, free of the ingrained qualities of a legal proceeding. Unless these merits are overbalanced by incurable defects, arbitration ought to displace legal procedure to a very appreciable extent; but it does nothing of the kind. In respect to private contentions, it makes hardly a ripple on the surface of litigation. A legal proceeding has its formal statements, technically called pleadings, which bring out clearly the questions of fact, and the legal rights upon which the decision must turn in order to be rational and just. It has its rules of evidence, for proof of the facts, under which everything pertinent is admitted and everything irrelevant shut out. It has its learned and experienced advocates, on each side, to apply the evidence to the facts, and the facts to the right of the case. Disputes about the pleadings, the evidence, or the law of the case, are submitted to, argued before, and adjudged, by a man whose professional training and life-work have especially fitted him to consider such questions intelligently and to decide them justly. Nearly every such question has arisen in prior cases, and whenever it has been disputed and argued to the utmost limit, there is an existing report of how it was decided, and of the reasons for the decisions, that aids in rightly deciding it again. If the

case is to be first decided by a jury, the judge has prepared the jury for a right decision by admitting all the proper, and excluding all the improper, evidence; by reviewing the evidence, without suggesting what parts or witnesses to accept or reject, and by putting the law before the jurymen in such a way that their untrained intelligence may apply it to any conclusion they may come to about the facts. In short, all that the civilized world has learned, in thousands of years, about finding out the truth and applying it to the practical uses of justice, is drawn upon to do justice to the parties in a lawsuit. Arbitration, in the way it is commonly practised, omits all these numerous and important aids to doing what is required to be done. It acts upon the theory of inviting a highly esteemed tailor or shoemaker to conduct a chemical analysis, to repair the machinery of a watch, or to operate a steam-engine. When lawyers go to arbitration before a single arbitrator, they always choose a lawyer, so that they may have all the attainable advantages of legal procedure without actually going to litigation. If there be two or more arbitrators, they seek to have one of them a lawyer, to help get the dispute properly sighted, properly enlightened by proof, and properly fitted to such principles of right and justice as apply everywhere, and that never change. Indeed, to go into an unsuitably prepared arbitration is as bad as the preceding carelessness that, in a good half, or more, of the cases, is at the bottom of the calls for arbitration or litigation. In a case of any importance, the services of a lawyer are as much needed for an arbitration as for court proceedings.

Lawrence.—(1) The capital of Douglass Co., Kan.; a railway center and the seat of the state university; pop. (1900), 10,862. (2) One of the capitals of Essex Co., Mass., and a leading manufacturing city of New England; cotton and woolen manufactures. Pop. (1900), 62,559.

Lawrence, Abbot.—(1792-1855.) An American merchant and politician; U. S. minister to Great Britain (1849-52), and founder of the Lawrence Scientific School at Harvard.

Lawrence, James.—(1781-1813.) An American naval officer. He captured the British ship "Peacock" Feb., 1813; as commander of the "Chesapeake," he was defeated by the "Shannon," June 1, 1813; he lost his life in this engagement.

"**Lawrence,**" **The.**—The flagship of Com. Oliver Hazard Perry in his battle with the British fleet under Com. Barclay, on Lake Erie, Sept. 10, 1813. The "Lawrence" was disabled in the action and Perry passed in a small boat, under a heavy fire, to the "Niagara," transferring his flag to that vessel. (See PERRY, OLIVER HAZARD, 453.)

Lawyer must Have a Knowledge of Business, The Successful.—4987.

Lazarus.—Brother of Mary and Martha of Bethany, near Jerusalem, and friend of Jesus, by whom he was raised from the dead.

Lead.—2948. (See also GALENA.)

Leadville.—The capital of Lake Co., Col., situated about 10,200 ft. above sea-level; noted for its lead and silver mines. Pop. (1900), 12,455.

Leakage.—An allowance made for wasting from casks.

Leander.—A youth of Greek legend, in love with Hero.

"**Leander,**" **The.**—A British warship which, while lying off Sandy Hook, Apr. 25, 1806, fired a shot which killed a sailor on board an American coaster. Citizens of New York, in mass meeting,

denounced the outrage and called upon the President for better protection. President Jefferson issued a proclamation ordering the arrest of the "Leander's" captain, if found within the jurisdiction of the U. S.

Leaning Tower of Pisa, The.—See PISA.

Learning to Speak.—729.

LEATHER AND TANNING.—

When skins are first removed from the bodies of animals they are but little adapted for use in any way. If kept moist, they soon rot. If they are dried, they lose their tendency to putrefaction, but become so hard and stiff that no use can be made of them. The various processes by which skins are rendered tough and pliable, and by which their tendency to putrefaction is removed, are known as tanning, and the product resulting from them is called leather.

The first thing to be done with skins that are to be converted into leather is to remove the hair from them. This is done by sweating, a process in which the skin is kept moist until enough putrefaction has taken place to soften it, and to loosen the hair so that it may be easily scraped off. This is done either by hand or with a skiving blade, according to the quality of the hide. A quicker method of accomplishing the same result, however, is to soak the skins in milk or lime, or in a solution of sulphide of soda.

After the hair has been removed, the hides are steeped in a bath containing a little acid. This process serves two purposes: it removes any lime or sulphide of soda that still adheres to the skins, and, at the same time, causes the latter to swell, thus preparing them to absorb the tanning materials.

Leather and Tanning.—*Continued*

Tanning substances, or tannins, which are agents used in converting hides into leather, are found in a great many plants. Both tea and coffee, for example, contain them; but those that are used for making leather are obtained from much cheaper materials. The barks of trees, especially those of the white oak, hemlock, and walnut, are most frequently used. The leaves, berries, and the young shoots, of a variety of sumac, are also much used, as are several other substances that are less abundant.

In tanning with bark, the swollen hides and the tanning materials are laid in pits, in alternate layers, until the pits are full. Enough water to cover the contents is then added, and the tanning substances are gradually extracted from the bark and absorbed by the hides. As thick hides require large quantities of tanning material, the pits must be frequently emptied, and the hides covered with fresh bark. Tanning by this process necessarily requires much time; but the leather produced by it is correspondingly good. The greater length of time required for bark-tanning has always been objectionable, and many efforts have been made to devise means for shortening it. These efforts have been successful, and it is now possible, by the use of certain patented processes, to make heavy sole leather in thirty-six hours. This is achieved by means of tanning extracts, which are prepared by treating the tanning materials with water, and concentrating the resulting liquid.

Tanning with bark, or tanning extracts, is the method used for making thick heavy leather, such as sole leather; but for making the soft flexible leathers used in the manufacture of gloves, other methods are generally employed. Of these, alum tanning, or white tanning, and the oil process, are in most extensive use.

When hides are treated with a solution of alum and common salt, the alum penetrates the hides, and by being deposited between the fibers, prevents the hardening of the substances that cause the stiffness in untanned hides. When the product obtained in this way is rubbed thoroughly with fat, and the fat is worked in, an exceedingly tough and pliable kind of leather is produced.

The application of this method of tanning to the skins of such animals as lambs, kids, and dogs, produces leather of the kind used for gloves. By applying the same process to heavier hides, leather suitable for harness is produced.

The tanning of skins with the hair on, to be used as furs, is generally carried on by the aid of alum. The skins are first thoroughly cleansed with soap, then dried; after drying, they are covered on the inner sides with fat, which is rubbed in as thoroughly as possible. The skins are soaked for twenty-four hours in a weak acid bath, to make them swell a little,

and they are finally tanned by a process of steeping in a solution of alum and common salt.

The last method of tanning that remains to be considered is that of oil tanning. In this method, the skins are freed from hair, and are swollen as for alum, and bark tanning. They are then rubbed with fat in the form of fish or whale oil. After being rubbed for a time, the skins are beaten in what is called a fulling machine, and are again rubbed with oil until they can no longer absorb it. It is sometimes necessary to repeat the rubbing and the pounding in the fulling machine, several times, in order to make the skins take up enough oil. The absorption process is accompanied by a chemical change causing a peculiar odor, that indicates the completion of the operation. The skins are then piled up in heaps and left for a considerable time. When sufficient oil has combined with the skins, they become yellow in color, which indicates that they have been converted into leather. When this stage is reached, the skins are washed in a solution of potash, which removes the surplus fat: they are then ready for the final treatment that prepares them for the use of the shoe and the glove manufacturers.

Before the tanning process, each hide was split from shoulder to tail into two sides. Each side is about half an inch in thickness, and this, of course, is too heavy to use in the manufacture of even the heaviest shoes. So the hides must be split. They are first trimmed of all roughness and are then put through a splitting machine whose keen knife slices through the tough leather, as if it was so much paper, reducing it to the desired thickness.

After splitting, the side is dampened. So also are the splits, or the parts which have been taken off. The latter are placed in a large round revolving mill constructed with stakes inside. Some tan liquor is spilled over them and afterward they are sent to the stuffing-loft to be stretched to their utmost and stuffed, which means, covered with grease. They are then hung upon sticks near the ceiling and are dried by steam. When dry, they are taken down and the grease is scraped off by a slicker. Whiteners with sharp slickers, or by machines, trim the leather on one side, and sometimes on both sides, until the surface is smooth. The edges are trimmed, and in another department the "finish" is applied. The side most whitened receives a coat of soap-blackening, and is jacked by a machine, the roller of which touches every part of the blackened side. Light paste is spread over the blackened part and, in some cases, red or yellow paste is put on the other side. After pasting, and jacking, comes the gumming. This is done with sponges. In a few hours the splits are dried and are taken down from the sticks, sorted according to their weight and general excellence, and are weighed and baled. The small pieces taken off in the splitting are called slabs. Massachusetts exports great quantities of split leather to Europe, and

Leather and Tanning.—*Continued*

much more is used in America for a cheap grade of durable shoes.

Going back to the side of leather, we find it has been dampened and sorted. The shop skiving-machine takes off some extra portions from the flesh side. The miller receives it, and if polish leather is to be made allows it to become well-soaked with oils; if it is intended for butt leather it is softened with grease. From the miller, the leather goes to the setters or stuffers, who are not the same as split-stuffers although they stretch the leather in much the same way. Setting machines are used where fine work is not especially needed. During the past twenty-five years, machines have so taken the place of hand labor that the trade of tanning is regarded with little of the favor of former years. Wages have greatly decreased, principally on account of the introduction of machinery.

After being set, the side that is to be polished is taken to the stuffers, who, with sharp slickers, take off nearly all of the red skin on the grain side. Blacking is then put on this side; there follows a rolling, and then a strong grain is indented in the blackened side. The machine doing this is called the pebbler. Such a machine can be fitted with rolls, the exteriors of which are cut so as to bring out on the leather over which it passes any sort of pattern desired. An oiling of this grain or pebble follows, and then the grainers receive the side and, by rolling a soft board made of cork over its surface, render it flexible, and fix the grain more firmly. If, on reaching the grainers, the side is not soft enough for graining, another man using the same kind of soft board makes it more pliable. The blackened and grained side receives two or more coatings of polish, and when dry the leather is ready for the measuring machine and the sorter. Polish leather and about all "grains" are sold by the foot. For instance, 1,000 sides of polish leather might measure 30,000 square feet; they would all have to be large sides. Splits, like calfskins, are sold by the pound. Polish leather is made largely into shoes and trimmings of various kinds. Satin-oil leather is made from a heavier side and has no grain but its natural one. It is treated mainly with oil, after blackening, and makes splendid material for water-proof shoes. Glove leather receives no graining, but is finished, after blackening, by a rolling which makes its surface compact, followed by a pasting on the blackened side, and then by the application of a soft creamy solution known as finish, which is spread over it with sponges. Buff leather receives no graining, but takes much grease in the stuffing. Other kinds are taking its place.

Nearly all of the imitation effects in leather made from cowhide are the product of the pebbling machine. These imitation leathers prove even more acceptable, in some instances, than do the genuine article. For instance, imitation alligator skin can be made with the help

of the pebbler and can be used in the manufacture of articles for which the real alligator would be unsuited. The currying of modern leathers requires much good judgment. The great demand in recent years for red and russet-colored shoes caused many leather makers to turn their attention largely from polish leather to the manufacture of the new kinds. A plant getting out polish leather was in some respects fitted for making red or russet leather. There were many carriers able to select the sides at a glance, and to tell just how much splitting was necessary to reduce them to the desired weight for the new shoe-leather. But coloring experts for leather were few in this country. It was not long, however, before such work became well understood. Red leather receives little or no grease, but is stretched or set like polish-leather. It is made from sides of grain leather—a term applied to every side of leather not a "split."

In making patent leather there is much fine splitting, and the side is left little thicker than heavy paper. Naturally there are several splits and slabs taken from such a side. After being set out on frames, the patent and enameled leathers receive a lustrous coating on the grain sides, the mixture being spread several times. Drying is done by the sun and by steam. Glazing machines are used on the enamel leathers, which are generally made from sides split heavier than the patent leathers. Most enamel leather is no more warrantable than patent leather, because of the lack of grease used in its manufacture. The light side would not hold grease, or, if it did, could not be treated successfully to the lustrous solution finish. The patent leather worker looks askance at patents, enamels, and similar leathers, knowing that they are likely to crack at any moment of wear. Generally he wears a sensible black calf or russet-leather shoe. Such leathers as cordovan and morocco are made from light skins of small animals, and their surfaces are treated in much the same manner as are the sides of large leather.

A substance that is somewhat related to leather is parchment. Parchment is made from the skins of lambs or kids. The hair is removed from these skins, and they are cleansed carefully and dried while tightly stretched. A smooth surface is produced by sprinkling the parchment with chalk and rubbing it with pumice stone. In the Middle Ages, parchment was very much used to write upon, but it is now used only for certain forms of documents, such as diplomas and patents.

Leavenworth.—The capital of Leavenworth Co., Kan.; a railway, commercial, and manufacturing center. Pop. (1900), 20,735.

Lebanon.—A mountain range of Syria, noted for its cedar and other valuable woods, which were highly prized by the Assyrians and the Hebrews for their buildings.

Lebanon.—(1) A town in Grafton Co., N. H.; on the Connecticut River. Pop. (1900), 4,965. (2) The capital of Lebanon Co., Pa. Pop. (1900), 17,628.

- Lecky, William Edward Hartpole.**—Born, 1838. A noted British historian.
- Lecocq, Alexandre Charles.**—Born, 1832. A French composer of light operas.
- Lecompton Constitution.**—During the struggle in Kan. over the question of its admission as a free or a slave state, the pro-slavery party held a convention at Lecompton, Sept. 5, 1857, and adopted a constitution sanctioning slavery and forbidding the enactment of emancipation laws. It was provided that the constitution as a whole should not be submitted to the people of the territory, the vote being taken only on the main question of a constitution with slavery or a constitution without slavery. Free state advocates refused to vote, and the constitution sanctioning slavery was adopted. Later, the territorial legislature ordered a vote on the constitution as a whole. The slave-state settlers abstained from voting and it failed of adoption.
- Leconte de Lisle (CHARLES MARIE RENÉ).**—(1818-1894.) A noted French poet.
- Ledyard, William.**—(1750-1781.) A Revolutionary officer; distinguished for his defense of Fort Griswold, near New London, Conn., against a superior force of British under Lieut.-col. Eyre (Sept. 6, 1781).
- Lee, Ann.**—(1736-1784.) The founder of the American Society of Shakers.
- Lee, Arthur.**—(1740-1792.) An American diplomat and statesman.
- Lee, Fitzhugh.**—Born, 1835. An American soldier and politician, appointed major-general 1863; a nephew of Gen. Robert E. Lee.
- Lee, Francis Lightfoot.**—(1734-1797.) An American politician; one of the signers of the Declaration of Independence.
- Lee, Henry.**—(1756-1818.) A general of the American Revolution, surnamed "Light-horse Harry." He was the commander of "Lee's Legion," was governor of Va. (1792-95); aided in suppressing the whiskey insurrection in 1794, and was a member of Congress (1799-1801).
- Lee, Richard Henry.**—(1732-1794.) A statesman and orator; member of the Va. house of burgesses; member of the Continental Congress in 1774; member of Congress (1775), and introduced the resolutions for independence, June 7, 1776; U. S. senator from Va. (1789-92).
- Lee, Robert E.**—Sketch of, 358.
- Leeds.**—In England. A city of Yorkshire, situated on the Aire. It is the largest city of Yorkshire, and the fifth in England. It is the chief center of England's woolen industry. Pop. (1901), 428,953.
- Leeward Islands.**—A group of small islands of the Lesser Antilles, a division of the West Indies. They lie to the southeast of Porto Rico, extending to the group known as the Windward Islands. They belong to Great Britain and are ruled by a governor, federal executive council, and federal legislative council.
- Legal Tender.**—Currency or coin which the government has declared shall be received in payment of debts.
- Legal-Tender Cases.**—During the financial emergency caused by the Civil War, Congress in 1862 issued \$150,000,000 of treasury notes. The law authorizing their issue made them legal tender for all private debts and public dues except duties on imports and interest on the public debt. The constitutionality of the act was frequently disputed, especially in its application to debts contracted prior to its passage, and the Supreme Court was called upon in several cases to decide the question. State courts generally maintained the constitutionality of the law. The Supreme Court, in 1869, in the case of *Hepburn vs. Griswold*, maintained the validity of the law only in so far as it did not affect contracts made prior to its passage. In 1870 this decision was overruled, and the constitutionality of the law in its application to preëxisting debts was maintained.
- Legaré, Hugh Swinton.**—(1789-1843.) An American politician and lawyer.
- Legends.**—1667.
- Legends of the Gods.**—See EGYPTIAN MYTHOLOGY, 1595.
- Leggett, Mortimer D.**—A distinguished U. S. volunteer officer during the Civil War; died, 1899.
- Leghorn.**—In Italy, the capital of the province of Leghorn, and the second seaport of the country. It has important manufacturing industries and is popular as a seaside resort. Pop. (1899), about 105,767.
- Legion of Honor.**—An order of France, bestowed for distinguished civil and military services. Instituted, 1802.
- Legislature.**—The body of men in a state or kingdom invested with the power to make and repeal laws. Colonial legislatures were generally modeled after the British Parliament, the King, House of Lords, and House of Commons, having their counterparts in the governor, the council appointed by him, and the representatives of the people. The first representative legislature in America met at Jamestown, Va., in 1619, when the representatives were elected by a property qualification. In 1776 Va. substituted a senate for its upper council and other states followed.
- Legs, Exercises for the.**—1822, 1823.
- Lehigh.**—A river in eastern Pa., length about 120 miles. Its valley is rich in anthracite coal.
- Lehmann, Lilli.**—Born, 1848. A noted German operatic soprano.
- Leibnitz, or Leibniz, Baron Gottfried Wilhelm von.**—(1646-1716.) A celebrated German philosopher and mathematician.
- Leicester.**—The capital of Leicestershire Co., England. The leading manufacture is hosiery, but boots and other leather goods are also made. Pop. (1901), 211,574.
- Leicester, Earls of.**
 (1) SIMON DE MONTFORT.—(About 1208-1265.) English general and statesman. He was a leader in one of the crusades in 1240. His wife was Eleanor, sister of King Henry III. He frequently resisted the king and came to be known as "father of the parliament."
 (2) ROBERT DUDLEY.—(1532-1588.) An English courtier who entertained Queen Elizabeth with great magnificence in his castle at Kenilworth.

- (3) **ALGERNON SIDNEY, or SYDNEY.**—(1622-1683.) An English patriot. He was beheaded unjustly for alleged complicity in the Rye House Plot.
- Leif Ericson.**—A Norseman, son of Eric the Red, from whence comes the name Ericson. He flourished about 1000 A.D. Having heard of a country over the sea to the west, he set sail with his companions in search of it. He discovered a country which he called Vinland, from the abundance of grape-vines growing there, where he wintered. The spot cannot now be identified, but conjectures point chiefly to New England.
- Leighton, Frederick, Lord.**—(1830-1896.) A noted English painter.
- Leinster.**—One of the four provinces of Ireland. It lies in the southeastern part of the island, and has an area of 7,622 square miles. Pop. (1901), 1,150,485.
- Leipsic, or Leipzig.**—A city in the Kingdom of Saxony. It is one of the principal commercial centers of Germany, the chief city of Saxony, the center of the German book trade, and one of the leading musical centers. Its university ranks third in size of the German universities. Pop., with incorporated suburbs (1901), 455,089.
- Lely, Sir Peter.**—(1618-1680.) A celebrated portrait painter, attached to the court of Charles II.
- Lemon.**—The fruit of the rutaceous tree *Citrus Meduca*. Botanically it is a berry of an ellipsoid form, knobbed at the apex, with a pale-yellow rind, whose outer layer is charged with a fragrant oil, and a light-colored pulp full of an acid, well-flavored juice. It is consumed in large quantities as a flavoring essence and a component of perfumes.
- Le Moynes, Charles.**—(1626-1683.) (1) A French pioneer and soldier who distinguished himself in the Indian wars in Canada. He was created *Sieur de Longueuil* by Louis XIV.
(2) **BARON DE LONGUEUIL.**—(1656-1729.) A French-Canadian soldier, governor of Montreal and commandant-general of Canada.
- Length of Principal Rivers.**—N. America, Mississippi and Missouri (longest in the world) 4,200 miles. S. America, Amazon, 3,600; Europe, Volga, 2,000; Asia, Yenisei, 3,400; Africa, Nile, 3,895; Australia, Murray, 1,700.
- Lenox.**—A town and summer resort in Berkshire Co., Mass. Pop. (1900), 2,942.
- Lenox, James.**—(1800-1880.) A bibliophist and philanthropist, founder of the Lenox Library in New York City.
- Lenox Library.**—A public reference library founded in New York in 1870. The building is on Fifth Ave., between 70th and 71st streets. It contains a museum, art galleries, and library. It has been combined with the Astor and proposed Tilden library, as the New York Public Library.
- Lens.**—See LIGHT.
- Leo (The Lion.)**—See CONSTELLATIONS, 3002.
- Leonidas.**—A king of Sparta, Greece, who was slain at the battle of Thermopylæ, 480 B. C., when, with 300 Spartans and 700 Thespians, he defended the pass against the vast Persian army under Xerxes.
- Leopard, The.**—2463.
- Leprosy.**—A deadly disease prevalent in warm countries from time immemorial. Its symptoms are: dusky red or livid tubercles of various



LEPER

sizes on the face, ears, and extremities; thickened state of the skin; a diminution of its sensibility; the falling off of the hair, excepting that of the scalp; hoarse, nasal, or lost voice; ozaena; ulcerations of the surface and extreme fetor.

Le Sage, or Lesage, Alain René.—(1668-1747.) A distinguished French novelist and dramatist, best known by his novel "Gil Blas."

Lese-majesty, a term used in law signifying high treason or any crime committed against the person and sovereign power of a state. Our English word *lesion*—a hurt, wound, or injury—comes from the same Latin source, *lese* or *leze*. *Lese-majesty* denotes therefore a hurt or wrong done the king, or an act of rebellion, usurpation, or defiance, directed against sovereignty. In Roman law the term signified an offense against the majesty of the Roman people. In Germany, under the present imperial régime, prosecutions have been frequent for this offense. Contriving, counseling, or consenting to the king's death in England constitutes the crime of *lese-majesty*.

Leslie, Frank.—(Originally Henry Carter.) (1821-1880.) A publisher, novelist and dramatist, best known by his novel "Frank Leslie's Illustrated Newspaper."

Lessee.—One to whom a lease is given.

Lesseps, Ferdinand de.—(1805-1894.) A French engineer chiefly known by his construction of the Suez Canal. He also organized a company for cutting a Canal through the Isthmus of Panama and the work was begun. The scheme collapsed and De Lesseps was, for the financial

- irregularities of the company, sentenced to imprisonment. The sentence was not executed.
- Lessing, Gotthold Ephraim.**—(1729-1781.) A famous German poet, philosopher, critic, and controversialist. Of his voluminous writings "Nathan the Wise" is most widely known.
- Lessing, Kari Friedrich.**—(1808-1880.) A German landscape painter of the Düsseldorf school. Many of his paintings illustrate the life of John Huss.
- Lessor.**—One who makes a lease.
- Lethe.**—A river of Hades in Greek mythology. The waters caused those who drank to forget their former existence.
- Letter of Advice.**—One giving notice of a shipment.
- Letter of Credit.**—A letter of credit is a letter addressed to a correspondent at a distance, requesting him to pay a sum therein specified to a person named, or to hold money at his disposal, and authorizing the correspondent to reimburse himself for such payment, either by debiting it in account between the parties or by drawing on the first party for the amount. These documents are used principally by travelers. They are issued for any reasonable amount by the banks of large cities, payable in sums to suit the holder. The amount of the letter of credit is deposited with the home banker. A list of banks which will advance money thereon is given on the back of the letter. The signature of the traveler or payee serves as a means of identification.
- Letter of Marque.**—The commission authorizing a privateer to make war upon or seize the property of another nation.
- Lever, Charles James.**—(1806-1872.) A noted Irish novelist.
- Lewes, George Henry.**—(1817-1878.) An English philosophical and miscellaneous writer. He lived with "George Eliot" after 1854, in which year he left his wife.
- Lewis, Andrew.**—(1720-1781.) A soldier in the French and Indian War, and in the Revolution. Served as brig.-gen. in the Continental Army (1776-77).
- Lewis, Dio.**—(1823-1886.) A well-known homeopathic physician, a lecturer on hygiene, and an advocate of various methods of physical culture.
- Lewis, Edmonia.**—Born near Albany, N. Y., 1845. A sculptor of African and Indian descent.
- Lewis, Francis.**—(1713-1803.) One of the signers of the Declaration of Independence.
- Lewis, Ida.**—Born at Newport, R. I., 1841. The daughter of the keeper of the Lime Rock Light-house; distinguished for her services in life saving.
- Lewis and Clark Expedition.**—A party of citizens and soldiers sent under command of Captain Merriwether, and Lewis and William Clark, by order of President Jefferson, to explore the country from the Missouri River to the Pacific Ocean. They ascended the Missouri River to its sources, crossed the Rocky Mountains and finding the source of the Columbia River, floated down that stream to its mouth. They explored almost all the territory lying south of the 49th parallel. This expedition was important, as its work (1804-06) formed the basis of America's claim to Oregon.
- Lewiston.**—A city in Androscoggin Co., Me.; the leading manufactures are cotton and wooleu goods. Pop. (1900), 23,761.
- Lexington.**—(1) The capital of Fayette Co., Ky.; the seat of Kentucky University; a commercial and manufacturing center and horse-market; pop. (1900), 26,369. (2) A small town in Middlesex Co., Mass.; noted as the scene of the first bloodshed of the American Revolution; pop. (1900), 3,831. (3) The capital of Lafayette Co., Mo., on the Missouri River; pop. (1900), 4,190. (4) The capital of Rockbridge Co., Va., on the North River; the seat of the Va. Military Institute, and of Washington and Lee University. Pop. (1900), 3,203.
- Lexington (Mass.), Battle of.**—On the night of Apr. 18, 1775, a detachment of 800 British soldiers, under Col. Smith, left Boston to capture or destroy some military stores which the Americans had collected and stored at Concord. Maj. Pitcairn, who led the advance, was opposed at daybreak at Lexington Green, eleven miles north of Boston, by about 50 minute men under Capt. Parker, who had been summoned by Paul Revere in his midnight ride. Pitcairn's men opened fire and seven Americans were killed and nine wounded. This was the first blood shed in the Revolutionary War. The Americans returned the fire and retreated, but rallied and pursued the British toward Concord, capturing seven prisoners, the first taken in the war. On their return from Concord, the British were reinforced at Lexington, by 1,200 men under Lord Percy. The Americans also had been reinforced and kept up a galling fire upon the British, who fled to Boston in disorder. The loss for the day was 93 Americans, and 273 British killed, wounded, and missing.
- Leyden, or Leiden.**—A city in the province of South Holland, Netherlands. The birthplace of Rembrandt. It has an important university and library. Pop. (1899), 53,640.
- Leys, Baron Hendrik.**—(1815-1869.) A noted Belgian painter.
- Libby Prison.**—A famous Confederate military prison in Richmond, Va., during the Civil War. It was originally a tobacco warehouse and a ship chandlery, and was named after its owner. It was chiefly used as a place of confinement for Union officers. In 1864, the prisoners dug a long tunnel by which a large number escaped. Many of them were recaptured, but a considerable number of the fugitives succeeded in reaching the Union lines. The prison was taken down in 1888, carried to Chicago, and there set up as a war museum.

LIBERALISM, THE BIRTH OF MODERN

THE IMPRESS LEFT ON EUROPE BY THE INSTITUTIONS OF NAPOLEON — THE POLICY OF REACTION — THE CONGRESSES OF THE GREAT POWERS — THEIR INTERVENTIONS IN FAVOR OF ABSOLUTISM — PARLIAMENTARY REFORM IN ENGLAND — THE REVOLUTIONARY OUTBREAKS OF 1830 AND 1848 — FRANCE UNDER LOUIS PHILIPPE AND NAPOLEON III. — APPARENT DEFEAT OF CONSTITUTIONAL LIBERTY IN GERMANY AND HUNGARY.

THE development of liberal ideas and republican institutions in Europe seemed about to pass under a long eclipse when the Congress of Vienna in 1815 restored absolutism in Portugal, Spain, and France, and invited back to these countries, and to most of the German and Italian states, the princes who had been driven out by the people. In France, even during the brief interval before the return of Napoleon from Elba, the conduct of the Bourbon king, Louis XVIII., and his courtiers, had given point to the epigram, that the Bourbons learned nothing and forgot nothing. Napoleon, in spite of his lust for conquest, had given civil law and modern institutions to the countries which he had overrun. The French eagles had been carried to Spain as the symbols of liberation from priestly tyranny, and to Poland as the harbingers of a re-born nation. The effect of these measures, and of the abolition of special privileges in nearly every country of western Europe, could not be entirely undone; but the history of the fifteen years which followed the battle of Waterloo was, at least so far as concerned the formal acts of government, a history of the triumph of reaction and of the systematic suppression of every visible movement for popular rights.

In France Louis XVIII. promulgated a constitution known as the Charta (June 4, 1814), which though less liberal than the constitution accepted by Louis XVI. in 1791, established the rudiments of representative government. The influence of reaction was soon felt, however, through the influence of the returned courtiers, many of whom had held commissions in foreign armies and navies, against their country. These officers, particularly in the navy, were put over the heads of men who had risen from the ranks and who had been covered with honorable wounds under the eagles of Napoleon. The tricolor was superseded by the white flag of the Bourbons, the Imperial Guard was removed from the service of the palace, and the military establishment of the old monarchy was revived. It is not surprising that discontent spread through the army, and that Wellington, who was ambassador at Paris, partisan as he was of reaction, was compelled to write to England, "The truth is that the king of France without the army is no king."

The history of Europe for fifteen years after the Congress of Vienna was the history of a combination of absolute monarchs to repress the yearning for constitutional liberty wherever it appeared. Alexander I. of Russia, cherished some romantic ideas in favor of liberalism and was looked upon by Metternich, the able absolutist minister of Austria, as little better than a Jacobin. But the liberalism of Alexander had little practical effect and he was easily frightened out of it by Metternich when liberal demonstrations broke out in Germany and France. To his initiative was due the formation of the "Holy Alliance," which was long regarded by European liberals as a compact of the sovereigns of the great powers to suppress constitutional liberty. The fact seems to have been that the "Holy Alliance" was nothing but a religious fancy, growing out of the influence exercised over Alexander by the mystic Madame de Krodener. The

compact proposed by Alexander, full of high sounding religious phrases, added nothing substantial to the political compact already made, and was taken seriously only by the king of Prussia. The emperor of Austria signed out of courtesy, but Lord Castlereagh explained that the English king was not constitutionally competent to bind Great Britain by his personal signature to such a document. England was a party to the compact against Napoleon, and this political document was much more potent during the next dozen years than was the mystic verbiage of the Russian czar. M. Seignobos sums up the real significance of the "Holy Alliance" in these words: *—

"The 'Holy Alliance' remained a solemn manifestation without practical result. Metternich qualified it as 'sonorous emptiness.' But it produced a profound impression, especially in France, on the enemies of the Restoration. The public confounded it with the alliance of the powers against France. It became accustomed to designate the Allies of 1814 under the name of 'Holy Alliance' which became for the Liberals the synonym of hostility to France and the Liberal *régime*."

In view of the manner in which the three absolutist powers of the Continent sought to regulate the affairs of Europe, it is not surprising that this impression gained ground. The battle of Waterloo had not been fought when King Ferdinand of Naples, having been thrust back upon his throne by the powers, signed a treaty of alliance with Austria, containing a secret clause, pledging the king to introduce no change into the government of the kingdom inconsistent with its old principles or with those which had been adopted by the emperor of Austria for the government of his Italian provinces. Ferdinand had been compelled by Great Britain, two years before, to grant a constitution to Sicily, and was at this moment promising one to Naples, but Great Britain took no serious steps to punish his bad faith or to resist the measures of Austrian absolutism. When the Sicilian Parliament was abolished, the English premier, Lord Castlereagh, stipulated only that the Sicilians who had taken part in the free political life of the country should not be persecuted. In several other provinces of Italy, the Austrian policy was successful, but the king of Sardinia, with the support of the Czar Alexander, maintained his independence, and the Pope resisted a general federation of Italy under Austrian leadership. In Spain the liberal charter was abolished and the leaders of the Cortes, after being declared innocent by the tribunals, were arbitrarily sentenced to long terms of imprisonment by the king.

The policy of the four Continental powers, including France, was kept in harmony at several general meetings of the sovereigns or their ministers. One of the first of these was held at Aix-la-Chapelle in September, 1818, to decide the terms upon which the foreign garrisons should be withdrawn from France. There were already signs of unrest among the French people, and three Continental powers,—Austria, Prussia, and Russia,—made a secret agreement again to impose their authority upon France by force if disturbances broke out there which threatened the peace of Europe. They even designated the points at which the troops of each power should assemble. Great Britain promised coöperation only in case of an attempt to restore the Napoleonic dynasty. Canning was now in power, and he clearly pointed out to his associate ministers that a permanent league of the great powers would array their governments against liberty, and that a British ministry which joined in such a compact would be held to sharp accountability by Parliament. Metternich was left to pursue his policy of repression with the aid of the Continental powers only, but with their aid he found the means for keeping German liberalism under restraint for a generation, and for spreading the influence of absolutism far beyond Germany. He warned the Prussian king, in 1818, against creating a representative system, and advised him to stamp out the Gymnasia and to restrain the press. These measures were agreed

* "Histoire Politique de l'Europe Contemporaine," p. 713.

upon at a meeting of the German ministers at Carlsbad (August, 1819), which was completely dominated by Metternich, and were promptly sanctioned by the Imperial Diet.

Another Congress under the influence of Metternich was held in 1820, at Troppau, in Moravia; this had to do chiefly with the affairs of Naples, where resistance to the Bourbon king had broken out. The emperor of Austria, at the end of October, received the Czar and King Frederick William at Troppau, and it was determined to invite King Ferdinand of Naples to meet his brother sovereigns at Laibach in the Austrian province of Carniola. The conference at the latter place (January, 1821) determined to occupy the kingdom of Naples by an Austrian army for some years to come. Ferdinand had already made the most liberal promises to his people and a constitutional government was in operation, but he was now encouraged to send a letter home, declaring that he had found the three powers determined not to tolerate the revolution and to restore his ancient power. The Austrian army crossed the Po and, after some sharp fighting against the Neapolitan people, entered Naples (March 24, 1821).



The powers had not disposed of Naples before their attention was directed to Spain. Revolution had indeed broken out there on New Year's Day of 1820, and King Ferdinand had been compelled (March 9, 1820) to take the oath of fidelity to the constitution of 1812. The uprising was due more to the army than to the masses, for the soldiers felt more directly than did the peasants the results of the misgovernment which kept their pay and supplies in arrears and which sent them to die of want and disease in the futile effort to hold for Spain the revolted colonies of Spanish America. The powers, while deprecating all popular movements, were slower to act in the case of Spain than in that of Naples, because conditions in Spain did not so directly threaten the peace of Europe. The Spanish constitutional party, however, was small in reality and it struggled with difficulty against clericalism on the one hand and the extreme measures of the red revolutionists on the other. When the Congress of Verona (October, 1822) decided that the powers should exact pledges from the Spanish government or withdraw their ambassadors, the work of enforcing absolutism was assumed by France. A French army under the Duke of Angoulême crossed the frontier (April 7, 1823), and within a few months Ferdinand was restored to absolute power. Against the advice of the French commander, edicts were issued declaring void all the acts of the Cortes affecting the monastic orders, dismissing all officials appointed since March 7, 1820, and finally at a later date (October 4, 1823) banishing forever from Madrid and from the country for fifty miles around, every person who, during the preceding three years, had sat in the Cortes or had held any public office of importance under the constitutional government. Only in Portugal a gleam of the light of constitutional liberty shone unextinguished, when Canning, under the authority of definite treaties, dispatched English troops to sustain the regency formed under the new Portuguese constitution. The warning which Canning gave (December 1, 1826), that England would fight, if need be, and that she would inevitably draw to her support the liberal sentiment of all Europe, was the first open intimation that the conspiracy of the monarchs of the great powers against liberal ideas was to come to an end.

While Great Britain had been giving at least her tacit consent to the restoration of absolutism on the Continent, the spirit of reform was stirring vigorously among her own people. The oldest Tories began to give way in the government to the younger members of the party, whose minds had been penetrated by a few rays of light from modern ideas. When Castlereagh died, in 1822, he was replaced by Canning, who openly proclaimed his friendship for the struggling Greeks, and who permitted many

Englishmen, including the daring seaman Lord Cochrane, to enter the Greek service. Catholic emancipation was being earnestly pushed by Daniel O'Connell, who asked only the fulfillment of the pledge given by Pitt when the Irish assented to the union with Great Britain in 1800. Pitt had promised that the Catholics in Ireland should have the same rights as had the Protestants, but through the obstinacy of George III., he had been unable to carry out his pledge.

O'Connell in 1823 founded the Catholic Association, which drew from the Irish people a kind of tribute called the "Catholic Rent," which was paid with more regularity than the king's taxes. Wellington was prime minister when the matter came to an issue in 1828 and at first refused to listen to any concessions to his fellow-countrymen of the Catholic faith. Finding, however, that public opinion was too strong for him, he suddenly changed his position, in the spring of 1829, and brought in a bill placing the Catholics in the same position in political matters as that occupied by members of the Established Church. The measure was passed by the union of the Whigs and the liberal Tories,—much to the disgust of the old Tory friends of the duke, who never again felt entire confidence in his steadiness of purpose.

The next important step in the progress of liberal opinion in Great Britain was the agitation for Parliamentary reform. The distribution of seats in Parliament dated back to the time of Elizabeth and had become grotesquely unequal by the lapse of time. Scores of boroughs which had once been flourishing towns or seaports had sunk into decayed villages or dwindled to two or three houses. Great manufacturing and mercantile centers had grown up, like Leeds or Birmingham, which had no representation. The "rotten boroughs" so-called, where a mere handful of voters had the power to choose a member of Parliament, were the darling perquisites of great lords. The practice of buying seats for cash was openly practised. The great middle class which had grown up with the progress of English manufacturing and trade began to call aloud for reasonable representation in the government. Most of the "pocket boroughs," as some of the rotten boroughs were called, because they were carried in the pockets of a few individuals, belonged to the Tory lords and contributed to prolong the reign of Toryism long after it had ceased to command the respect of the nation. The Whig leaders brought the subject before Parliament almost every year, but it was not until after the fall of Wellington in 1830 and the installation of the Whigs under Lord Grey, that the movement began to assume a serious character.

The first reform bill was brought in by Lord John Russell in March, 1831. So powerful was the opposition of the rotten boroughs that the second reading of the bill in the Commons was carried by only one vote (302 to 301) in the largest total ever recorded. Parliament was dissolved and another election was held, which brought the ministers back to power with a majority of 136. The reform bill promptly passed the Commons, and the resistance of the Tories was transferred to the House of Lords, in which they were omnipotent. The Lords rejected the bill by a majority of 41, but only to invite a popular agitation which lasted for months and threatened an appeal to force. The bill was again passed and was given its second reading in the Lords by a small majority, April 14, 1832. The Tories attempted to mutilate it, but were met by Lord Grey with a refusal to carry on the government unless he could have the bill as it passed the Commons. The Tories dared not accept the responsibility of forming a cabinet in the face of an indignant nation. Lord Grey would not return to power until he had a pledge in writing that if the Lords still resisted the demand of the people, the king would create a sufficient number of peers to make a reform majority in the upper House. There was nothing left for the Tories to do but surrender. They absented themselves from the House of Lords when the vote was taken and allowed the reform bill to pass by a safe majority (June 4, 1832).

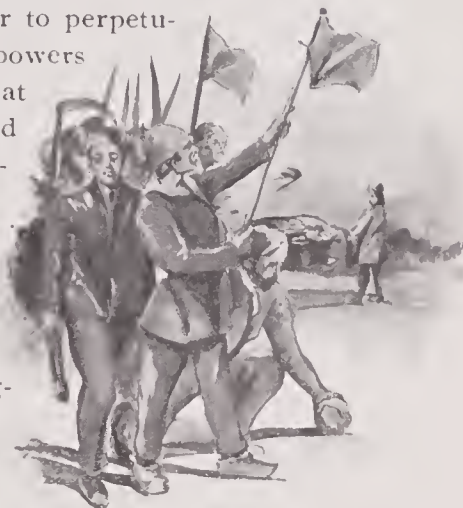
There was nothing in the character of the new legislation to alarm the Tories to the extent of fearing that Great Britain would become Jacobin, nor even to justify the hopes of the laboring masses that they would have a larger influence in the government. The suffrage was still limited to householders occupying tenements of the value of £10 (\$48.50), and in the counties, to copyholders and to leaseholders holding lands of the same annual value, and to tenants at will of holdings of £50. The artisans in the town and the agricultural laborers in the counties were still without representation or direct influence in their government. The conservative character of the reform is shown from the fact that the ratio of voters was still only one in twenty-two of the population (while under universal male suffrage it is about one in six), and that the number increased only from 247,000 to 370,000 in the counties, and from 188,000 to 286,000 in the boroughs. It was the redistribution of seats that contributed most to correcting the inequalities of the old apportionment. No less than 56 rotten boroughs lost their members, while 30 small towns were reduced from two members to one. There were 143 seats distributed among the new centers of population, without increasing the total membership of the House of Commons. London had ten of the new seats, and twenty-two large towns, including Liverpool, Birmingham, and Manchester, received two members each. Scotland received eight new borough members, but the districts in Ireland, as they dated back only to the year 1800, required little change.

The champions of reaction had nothing to fear in France, if they judged by the elections which were held after the second restoration of the Bourbons. The Liberals and the friends of Napoleon were cowed by recent events, and a Chamber of Deputies more reactionary than the king himself was chosen. The Count of Artois, the brother of the king, was the ruling element among the returned emigrants; and even Talleyrand, facile as he was in turning his political coats to meet the exigencies of the moment, could not satisfy the Royalists that he was enough of a reactionary to continue in power. "Retribution upon traitors" was the first demand of the new Chamber. Marshal Ney was put to death (December 7, 1815), thousands of persons in all grades of the public service, even those in the schools and colleges, were dismissed from their posts, and the king himself was unable to check the extreme measures of the ultra-Royalists. There began to develop a schism between the Throne and the Chambers, in which the latter, seeking the restoration of the old *régime*, found themselves contending for privileges which had belonged to the Crown prior to the Revolution.

The triumph of the Government over the extremists in the elections of 1816, led to a new electoral law, which gave power to the middle class which had acquired wealth by banking, commerce, or manufactures, and which was imbued with modern ideas. Liberal ideas made such rapid progress in France that Richelieu, who had restrained the Royalists at the beginning, gave place to a young and progressive minister, Decazes, and the latter in turn was beaten in the elections of 1819 by the demand for still greater progress. The assassination of the Duke de Berry (February 13, 1821) created a temporary Royalist reaction, but only paved the way for the downfall of the Bourbon family. The Count of Artois succeeded to the throne as Charles X. in 1824, to the great delight of the reactionists. But the country was too strong for them. The elections of 1830 resulted in a great majority against the government. Charles attempted to declare the elections void, to silence the press, and to revise the electoral system. Revolt broke out (July 27, 1830) on the day after the publication of the ordinances. The troops and the guards refused to sustain the government. Louis Philippe, Duke of Orleans, a representative of one of the younger branches of the Royal house, was first made lieutenant-general of the kingdom and then king.

While there was little to be feared from the elevation of Louis Philippe, by event the most timid supporters of privilege, the circumstances surrounding the revolution

revealed the fact that a new Europe was born, which was no longer helpless under the yoke of absolutism. It was found impossible for the allied powers to unite against the expulsion of the elder Bourbon line. Intervention might possibly have taken place if an attempt had been made to restore the Napoleonic dynasty or to perpetuate the republic. Louis Philippe was prompt to represent to the powers that he had accepted the throne only to check the revolution; that his presence alone guaranteed France against republicanism, and that the treaties of 1815 would be maintained. The English Government ordered its ambassador to remain at Paris and there to recognize the new government. The Czar of Russia at first prepared to execute the compact of 1815, by directing Russian subjects to quit France and by forbidding the display of the tricolor in Russian ports. He even sent agents to Austria and to Prussia to urge war; but the other governments had already recognized Louis Philippe, and the czar was compelled to express his disgust by refusing the title "My Brother" to the new sovereign, as he afterward sought to refuse it to Napoleon III.



The government of Louis Philippe appealed neither to the love of military glory among Frenchmen nor to the sober instincts of the supporters of constitutional liberty. The new king was driven by foreign complications, growing out of his effort to build up the fortunes of his family through the Spanish marriages, to seek alliance with Austria and to imitate her policy of reaction. The Spanish marriages,—which united the Duke of Montpensier, youngest son of Louis Philippe, to the sister of the queen of Spain, on the same day that the queen herself married a cousin, physically unfit for marriage (October 10, 1846),—were made in the face of promises to Great Britain that no such arrangement should be made for extending the influence of France. The reactionary tendencies of the French court prevented the king from comprehending the force of the gathering storm which broke over his head in 1848. The chambers were elected under a franchise which gave a vote to no more than one person in one hundred and fifty, and were so packed with officials of the administration that moderate reformers despaired of accomplishing any valuable results by agitation. Socialism, taught upon a more or less scientific basis by Saint-Simon and Fourier, was in the meantime making headway with the masses. When Louis Philippe, in the speech from the throne, at the close of 1847, defied popular sentiment and later attempted to break up a reform banquet, the spirit of revolution blazed forth. Louis Philippe abdicated in favor of his grandson, the Count of Paris (who afterward served with such distinction in the Civil War in America on the staff of Gen. McClellan), and fled from Paris (February 24, 1848). A provisional government was established and a republic was proclaimed.

The new government of France was controlled by socialists of an impracticable, if not a dangerous, type. The experiment of the "national workshops," which extended an invitation to the shiftless and idle to come to Paris from all over France, to draw salaries from the public treasury, invoked a dangerous uprising when they were suppressed. The fighting of "the four days of June" (June 23–26) was one of the ugliest manifestations of the temper of the revolutionary classes that had been witnessed since the times of the first revolution. Gen. Cavaignac, minister of war, having been invested with supreme authority, summoned all the troops in the neighborhood of Paris to his aid, and fought through the streets with bayonets, solid shot, and artillery, until the revolt was crushed. The unpleasant impressions left by this movement contributed much to the willingness of the more substantial classes to accept Louis Napoleon as the savior of society in France. This new figure in French politics was nominally a

nephew of Napoleon I., by his brother Louis and his step-daughter Hortense. He had been in exile all of his life, but was elected to the Chamber from four different departments before the decree of exile was suspended. He was now elected president over the head of Cavaignac (December 10, 1848) by a vote of about 5,000,000 out of a total of 7,000,000 votes, which were cast under the system of universal suffrage embodied in the new constitution.



Louis Napoleon, like his great uncle, had supreme faith in his "star." The opportunity was ripening for carrying out his long-cherished project of winning the throne, but it required skilful maneuvering to put the Assembly in the wrong and to pave the way for transforming the constitutional republic into a revival of the Napoleonic Empire. The republicans and the Assembly struggled in vain in the toils which a clique of insignificant but unscrupulous conspirators spread for them. In the early morning of December 2, 1851, was executed the famous *Coup d'état* which made Napoleon master of France. The leaders of the Assembly, and other prominent statesmen, were arrested and imprisoned, those members who escaped arrest, and tried to do business, were dispersed by bayonets, and proclamations were issued changing the frame of government and appealing to the army for support in the restoration of the Napoleonic traditions. There was some fighting against the new *régime*, but the army stood firm for the Prince President, as the Napoleonic adventurer was called, and it remained only to submit to popular vote the question whether he should be invested with power to frame a constitution. This vote (Dec. 20, 1851) was more than ten to one in the affirmative and on New Year's day, 1852, Louis Napoleon took possession of the Tuileries, the ancient palace of the kings of France, and restored the eagle as the military emblem of the army. The Empire was restored in all but name, and the name was assumed a year later (Dec. 2, 1852) on the anniversary of the coronation of the first Napoleon in 1804. Louis Napoleon took the title of Napoleon III., assigning to the young son of Napoleon I. and Marie Louise, who had died in exile near Vienna, the title of the second of the name.

The revolutionary movement of 1848 was not limited to France. While the destruction of the Republic by Louis Napoleon was not a triumph of constitutional liberalism, it had the peculiar significance that it was in direct defiance of the conventions of 1815 against the restoration of the Napoleon dynasty or the republic in France. Notwithstanding this fact, the great powers took no steps to enforce the treaty of 1815. There was grave fear at first that the French Republic would take the offensive, in accordance with the traditions of the first revolution, and enter upon a way for the emancipation of the Poles and Italians. Lamartine allayed these fears by the announcement that the Republic meant peace. This pledge was renewed by Louis Napoleon, in spite of the vapping in which he indulged for the benefit of the French army regarding the restoration of the glories of the first Napoleon. The other powers, in truth, had all they could do to maintain absolutism at home, without entering upon a crusade in its behalf against the French Government. All Europe seemed to be in a ferment in 1848. France was not the first spot in which signs of uneasiness appeared, but the revolution of February at Paris lighted a torch which served as a beacon to the revolutionists in other countries.

The aspirations of the Germans for constitutional liberty were severely repressed after the settlements of 1815. Stein, the great patriot who had aroused German national feeling against Napoleon, looked forward to the creation of free institutions when Prussia and Germany were restored to their ancient prestige. The Prussian King, Frederick William, promised the fulfillment of these hopes by an ordinance

(May 22, 1815), declaring that a representation of the people should be established. Delay in preparing the constitution, and proposals to give the controlling power to the upper classes, gradually changed the hopes of the German Liberals into despair. Then came the submission of Prussia to the reactionary policies of Metternich and the substantial postponement of German liberty for a generation. The government of Germany, however, was not corrupt and oppressive in the sense of Spanish or Neapolitan absolutism. The men who gathered about the king sincerely desired to promote the greatness of Prussia, and to their policy is to be attributed the adoption of the system of popular education, which became one of the foundations of the intellectual and political life of modern Germany. In Weimar, where the grand duke was the friend and associate of Goethe and Schiller, representative institutions were put in working order at an early date, and in some of the other minor states it began to be recognized that dependence upon the people was the best safeguard against the supremacy of Prussia. When the revolution of 1830 began to cause a ferment throughout Europe, the courts of Hanover and Saxony promptly responded with liberal constitutions.

In Prussia, absolutism continued to hold sway until after the death of Frederick William III. in 1840. Much was expected from his son, Frederick William IV, but high-sounding promises evaporated without action until just before the revolution of 1848. The King at that time proposed to establish a semblance of constitutional government by convoking the United Diet of the kingdom (February 3, 1847). It was soon developed that the king proposed to grant no real share in the government to the Diet, and there was a vigorous revolt by the Liberal deputies. The dissolution of the Diet (June 26) left the Liberals in sour mood toward the king and the government and ready for the spark which was lighted early in the next year. The demand for a constitution gathered crowds in the streets of Berlin, in the early days of March, 1848, and drew from the king (March 18) an edict summoning the United Diet for April 2, and announcing that the king had determined to promote the creation of a German Parliament and constitutional government in every German state. An unfortunate conflict broke out between the troops and the people, apparently through accident, but further trouble was allayed by the action of the King in proposing to put himself at the head of United Germany.

The King promised, in a proclamation of March 21, not only to place himself at the head of the German nation, but to grant to his people nearly all those great reforms which lie at the basis of constitutional liberty in England and in the United States,—liberty of the individual, the right of public meeting, trial by jury, and the conduct of the government by a responsible ministry. But these promises were soon repented of. While the Parliament of Frankfort was endeavoring to draw a constitution for all Germany, the new Prussian Assembly went to extremes in Berlin. Disorders that almost threatened the foundations of the social order continued all through the summer of 1848. King Frederick William withdrew to Potsdam and put himself in communication with the reactionists in Austria. The Prussian Assembly debated a constitution abolishing nobility, orders, and titles, and striking out from the title of the sovereign the words which described him as king by the grace of God. When the King heard of the fall of the liberal government at Vienna before the cannon of Windischgratz, he dismissed his liberal ministers, called to office a soldier, the Count of Brandenburg, turned his back upon a deputation from the Assembly, and prorogued its meetings to Brandenburg (November 27, 1848). Parliamentary resistance was made, but troops entered Berlin, dispersed the Assembly, and the king conferred upon Prussia a constitution drawn up by his conservative advisers.

In the diverse countries united under the crown of Austria, the popular uprising took the form of national and race movements. The Hungarians had enjoyed

from the time of Maria Theresa a separate constitution. The Diet of the Hungarian nobles was required to be assembled every three years, but the last meeting for many years, was held in 1812. Friction was frequent between the central government at Vienna on the one hand and the ancient aristocracy and the liberal leaders in Hungary on the other, but it was not until 1848 that this friction developed into armed revolution. Disorder broke out in Vienna upon the news of the revolution at Paris; Metternich, the high priest of absolutism, was dismissed in terror by the emperor; and a central committee was formed for the government of the city. The press was declared free and a constitution was promulgated on the order of that of Belgium (April 25, 1848). The emperor finally fled to the Tyrol with his family, and the new Constituent Assembly, elected by universal suffrage, met at Vienna on July 22. Differences of race and language were serious obstacles to united action, but the abolition of the *corvée* (forced labor by the peasants on the highways) was voted, and many privileges of the nobles were suppressed or curtailed. In Hungary, upon the motion of Louis Kossuth, a brilliant orator and fearless liberal leader, an address was voted to the emperor (March 3, 1848) demanding a constitution. Liberty of the press, equality of taxation, and the abolition of aristocratic privileges, were promptly voted by the Diet under the pressure of the liberal clubs. The government at Vienna yielded to the demands of the Hungarians, and the Palatine of Hungary was authorized to exercise all the powers of the king.

The fair prospect of civil and national liberty in Hungary was soon dissipated. The emperor, encouraged by some Austrian victories in Italy, withdrew from the Palatine his powers, and declared that the concessions made to the Hungarians would not be considered valid without the consent of the other sections of the Empire. The slavish element of the population, bitterly hostile to the Hungarians, was turned against the latter, the Palatine fled from Hungary (September 24), and the democratic element in the Hungarian Diet named a committee of public defense, of which Kossuth was the controlling spirit. Lambert, an Austrian general, was sent from Vienna to take command of the Hungarian troops, in defiance of the new constitution. He was surrounded and massacred, and Jellachich, the Slav commander, was able to escape from Hungary only with the loss of 10,000 men. Hungary was declared in state of war, and the Diet dissolved, but regiments at Vienna refused to march against the Hungarians, there was a popular uprising, and the emperor again fled. War against Vienna and the Hungarians was now organized by the Royalists, upon a large scale, Windischgratz besieged and captured the city, the democratic chiefs were shot, and the constitution was practically suppressed.

In order to crush the revolt in Hungary, Kossuth and his accomplice were declared guilty of high treason, and Windischgratz was given supreme authority. The Emperor Ferdinand was made to abdicate (December 2, 1848), and the crown was conferred upon his nephew, Francis Joseph, in order to liberate the government from the oath taken by Ferdinand to the Hungarian constitution. The Austrian army was repulsed in its attacks, Hungary was declared independent, the republic was proclaimed, and Kossuth was elected president. The Austrian emperor, driven to the end of his resources, appealed to the Czar of Russia against the party of European revolution. Nicholas promptly responded, an army of 80,000 Russians crossed the Carpathians (June 14, 1849) and the Hungarian army capitulated at Vilagos (August 13). Kossuth and his circle escaped to Turkey and from thence to the United States, where the hero of Hungarian liberty made a tour of the country and received a great ovation. Absolutism was restored throughout Austria, the ancient constitution of Hungary was declared forfeited by her revolt, and the central government was strengthened in a manner intended to prevent future outbreaks.

LIBERALISM IN EUROPE, THE TRIUMPH OF

REAL SIGNIFICANCE OF THE EVENTS OF 1848—GENEROUS POLICY OF BISMARCK IN GERMANY—FRANCIS JOSEPH ACCEPTS THE HUNGARIAN CONSTITUTION—FRANCE AFTER 1870—THE EVOLUTION OF REPRESENTATIVE GOVERNMENT AND RESPONSIBLE MINISTRIES THROUGHOUT EUROPE—DIFFICULTIES OF PARTY ORGANIZATION—THE REFERENDUM IN SWITZERLAND—SOCIALISM AND THE ABOLITION OF THE SLAVE TRADE—THE PRESENT STATE OF EUROPE.

WHILE the popular uprisings of 1848 seemed in every case to have resulted in the triumph of privilege—in the suppression of the democratic movement in Italy, the dispersal of the German assemblies, the conquest of Hungary by Russian bayonets, and the coronation of an imperial adventurer in France—the moral effect of these movements was far otherwise. In every state it was coming to be recognized that there was a new force arising which must be reckoned with in forming and in carrying out public policies. It was recognized by all who could read intelligently the signs of the times, that this force,—the public opinion of the masses,—had been only temporarily repressed by the utmost exertion of the power of absolutism, and that it was bound to wax strong with the spread of knowledge and popular education, while the artificial strength of the old *régime* steadily waned before it. This triumph of the forces of political progress over those of reaction was so clearly written in the political heavens that it came in Germany and Austria almost without a struggle, soon after the bitterness caused by the events of 1848 had had a brief period to subside.

While the revolution of 1848 left little mark upon the form of the Prussian government, a new Germany was growing up which would not brook the perpetuation of old conditions. Bismarck, the apostle of the headship of Prussia in the German nation, was at first the disciple of reaction, but after the defeat of the Austrians at Sadowa, he saw that he must appeal to the national feeling of the German people if he would build up a strong and united country. When he proposed, in the conferences over Schleswig-Holstein in the spring of 1866, that the Federal Diet should consider the reorganization of the constitution, with a view to a national congress elected by universal suffrage, his proposal was ridiculed as a mere political feint. But when Bismarck returned from Sadowa, midst the acclamations of the German people, he proved that his proposals were genuine and sincere. He even went so far as to admit the illegality of his previous dealings with the Prussian Assembly in raising taxes without their consent, and asked for an act of indemnity. A new party, called the National Liberal party, rallied around the king and prime minister, who were showing so clear an insight into the means of securing the future greatness of the nation. The constitution of the North German Confederation, which was promptly drawn up, provided for a parliament elected directly by the people. The leaders of the liberal opposition in the outlying states entered the new representative body and found there an opportunity for a wider political career than within the limits of their own states, which contributed to enlist them under the banner of a united and free Germany.

The desire for constitutional government in Austria survived the tyranny of Metternich. When the Austrian armies returned, defeated, from Magenta and Solferino, in 1859, disruption threatened the Austrian state. The Treasury was nearly bankrupt under the long *régime* of irredeemable paper money, rebellion threatened to break out in Hungary, which had contributed thousands of soldiers to the Italian camp, and it was

obvious that the future of the nation depended upon serious concessions to the growing spirit of liberalism. The emperor proposed to create an Imperial Council (Reichsrath) drawn from the members of the provincial councils, and at once appointed a central council to study the financial needs of the Empire (March, 1860). In order to secure the attendance of the Hungarian members, the emperor promised to restore the ancient county organization and to take measures for assembling the Hungarian Diet. When the new council met, a compromise was proposed between the champions of Hungarian independence and the advocates of a centralized Austrian monarchy. To Hungary was given back its old constitution, and a separate Hungarian Diet was authorized to deal with all measures except those affecting the whole Empire. The Magyars, the imperious upper classes who ruled Hungary, insisted upon independence. The Diet declared against the validity of all laws made without its consent since 1848, and Hungary stood for two years upon the verge of rebellion, in spite of the popularity in other parts of the Empire of the liberal concessions made by the emperor.

After the defeat of Austria at Sadowa, an accommodation was finally reached which recognized nearly everything for which the Hungarians had contended. Francis Deák, the conservative, but firm, champion of constitutional government for Hungary, had already secured the appointment of a committee, by the Diet, to meet half-way, if possible, the liberal propositions of the Emperor. The report of this committee (June 25, 1866) was made eight days before the battle of Sadowa. The emperor promptly called to office Count Beust and granted practically all that the Hungarians demanded. Francis Joseph was crowned king of Hungary (June 8, 1867) amidst the acclamations of the Hungarian people at Pesh; he proclaimed a universal amnesty, and distributed among the families of those who had turned against him in 1849 the gift of money made to an Hungarian monarch on his coronation. Kossuth alone refused to return to Hungary so long as a Hapsburg was its king. The Reichsrath continued to act as the federal legislature of the Empire, and as the local legislature of the Western provinces. Metternich had been dead less than eight years, but the work of his lifetime in the service of absolutism was undone, and Austria took her place among the constitutional governments of modern Europe.

Great Britain, under the free working of the institutions handed down from King John and the Revolution of 1688, advanced steadily in economic development and in the extension of popular rights during the century. The rise of the factory system, following the application of steam to machine production, led to evils which soon attracted the attention of statesmen and philanthropists. The government of Sir Robert Peel, which began in 1841, passed acts prohibiting the labor of women and children in the mines, reducing child labor to eight hours a day, and appointing inspectors to see that proper sanitary laws were observed in the factories. The list of crimes for which capital punishment was inflicted, which in the eighteenth century included almost every serious offense, was gradually reduced early in the nineteenth century. The last hanging for forgery occurred in 1829, and capital punishment was practically abolished for all crimes save murder and treason, in 1841. Abolition of imprisonment for debt, the modification of the laws which had prevented combinations by laborers, and the foundation of popular education, were other features which marked the progress of Great Britain in the path of modern civilization.

Among the most important forward steps taken in extending education and the capacity of the people for self-government, were the adoption of penny postage, the reduction of the stamp tax on newspapers, and the reduction of the excise on paper. Sir Rowland Hill was considered a hopeless visionary when he first brought forward the project for abolishing high discriminating rates on letters and establishing a uniform rate of one penny for a package of a half ounce sent anywhere within the kingdom.

The average postage on every chargeable letter throughout the United Kingdom was then six pence and a farthing (13 cents) and to send a letter from London to Belfast cost a shilling and four pence (32 cents). The proposition to reduce the rate to one penny, it was declared by the Postmaster General, Lord Lichfield, in 1837, would result in such a rush of mail matter that the walls of the postoffice would burst, and the whole area in which the building stood would not be large enough to receive the clerks and the letters.* But Sir Rowland Hill and his supporters did not consider the argument conclusive against a project that would so greatly serve the public convenience as to result in an appalling increase of business. They brought the government to their side in 1839. The stamp tax on newspapers had already been reduced in 1836 from four pence to a penny, in spite of the lamentations of conservatives that it would result in a flood of cheap newspapers, and turn the heads of the masses.

These steps in affording the people a broader knowledge of public affairs, with the aid which was brought to the spread of this knowledge by the railway and the telegraph, were naturally followed by other political reforms which supplemented and completed the reform of the rotten-borough system in 1832. Several projects for extending the franchise to larger classes of voters were proposed before a comprehensive act finally became law. Lord John Russell brought in a bill in 1866, which would have added about 400,000 electors to the 2,000,000 already in existence. The Tories opposed the bill, and secured its defeat by the aid of a small party of Liberals, who were dubbed by Mr. Gladstone, "the Cave of Adullam," because to their group, as to David of old, fled "every one who was in distress, and every one who was discontented." It was reserved for the Tories, now called the "Conservatives," to propose the next reform bill, under the leadership of Disraeli. The project was amended and broadened in the Commons, by the Liberals, but Disraeli accepted all the amendments, against the protest of many members of his own party, and the project became law (August, 1867). A proper qualification for the franchise, of £5 rental value in the towns, and £12 in the counties, was still retained. The last considerable class still deprived of the franchise, the agricultural laborers in the counties, was admitted to the suffrage by the reform bill of 1884, which provided also for a redistribution of seats.

The spirit of dissatisfaction with old conditions took the form in Ireland of the Land League organization and the agitation for Home Rule. The Irish had long desired an Irish Parliament, and the agitation in its behalf, in 1877, was in a certain sense a revival of the demand of O'Connell for the repeal of the union. The inspiring causes of the later agitation, however, were largely economic, and grew out of the unfortunate state of agriculture and land tenure. The Home Rule party began to make itself felt when the leadership fell to Charles Stuart Parnell. Finding themselves unable to obtain serious consideration for their demands from the conservative administration, a policy of obstruction was adopted by the Irish members in Parliament. This policy was encouraged at home by the growing poverty of the Irish peasants under the system of absentee landlordism and excessive rents, which was draining away, without compensation, the surplus product of the country. Mr. Gladstone undertook to remove their grievances by correcting several obvious abuses. A land court was created in 1881, which was empowered to fix rents against which protest was made, and which actually made reductions ranging in some cases from 30 to 50 per cent. These measures seemed to fan the flame rather than to smother it, and the celebrated Land League was formed to agitate against landlordism.

Then came in quick succession a series of events which aroused the feeling of the British people more keenly than had any occurrence during a generation. Mr. Forster,

* See the interesting narrative of Justin McCarthy, "A History of Our Own Times," ch. iv.

the secretary for Ireland, imprisoned Parnell and forty other chiefs of the Land League. Outrages upon landlords and their agents redoubled, Parnell issued a manifesto urging the whole tenantry of Ireland to refuse to pay rent until they brought the Government to its knees, and his advice was largely acted upon. Gladstone astounded conservative sentiment in England by the celebrated "Kilmainham treaty" (April, 1882), by which Parnell and his associates were released upon an agreement to withdraw the No-Rent Manifesto, and to discourage outrages. Mr. Forster, the Irish secretary, and the viceroy, at once resigned. Lord Frederick Cavendish was appointed secretary, and within six days was assassinated, in broad daylight, in Phoenix Park, Dublin. A strong revulsion of feeling against the government broke out, but the Liberal party retained its majority in Parliament and when Gladstone, after a brief term out of office, returned to power in 1886 he entered upon negotiations with the Irish leaders for Home Rule.

The mere rumor that the prime minister was negotiating for the creation of an Irish Parliament and a separate Irish exchequer stirred England to its depths. Mr. Joseph Chamberlain resigned (March, 1886) as a member of the cabinet, and his resignation was followed by others. Gladstone persevered, however, and introduced the Home Rule bill. Debate ran along for two months (April 8–June 7, 1886). The Parnellites were ready to support the measure, but as member after member among Gladstone's former followers in the Liberal side, rose and declared war on his chief, it became evident that the bill could not pass. It was beaten on the second reading (June 19) by a vote of 341 to 311, no less than 93 Liberals voting against the government. Mr. Gladstone at once dissolved Parliament and appealed to the country. The dissenting Liberals stood openly as opposition candidates and found Gladstonians fighting to wrest their seats from them. When the returns were in it was found that the conservatives numbered 316, the Gladstonians, 191, and the Parnellites 85. The Liberal Unionists, or dissenting Liberals, were 78. The conservative government, which was established, passed a coercion bill of a stringent character and secured the reform of the rules of procedure in the House of Commons.

The refusal of the English people to consent to Home Rule was substantially the end of the contest. The struggle was continued by the Irish members of Parliament, but divisions broke out in their ranks, which gradually frittered away the strength they had derived from the moral support of a considerable section of the English people. Parnell, although refused recognition by Gladstone, after his connection with a private scandal became public, struggled against his deposition from leadership, and caught a cold at one of his outdoor meetings which caused his early death (October 6, 1891). Gladstone returned to power in 1892 and brought in a new Home Rule bill which created a local Irish Parliament, but continued the Irish representation in the Imperial Parliament at Westminster. The bill passed the Commons, 301 to 267, but was promptly rejected by the House of Lords by a majority of 419 to 41 (September 8, 1893). Gladstone retired from office in March, 1894, and Lord Roseberry, who succeeded him as Liberal leader, announced that so long as England was opposed to Home Rule the question must be relegated to the future. The split in the Liberal party was not healed, however, and most of the Liberal Unionists united permanently with the conservatives in support of the resolute policy in foreign affairs sometimes denominated imperialism.

All European governments, with the exception of Russia and Turkey, are now constitutional in their form if not in their actual working. The French Republic, perhaps the furthest advanced toward complete democracy, although threatened during its first twenty years with many perils from within as well as from without, has proved the most enduring form of government which France has enjoyed since the Revolution of 1789. Adolphe Thiers, a former minister of Louis Philippe, was elected president

during the panic of the German invasion, and succeeded for two years in commanding a majority of the Assembly, in spite of the conflicting elements of which it was made up. The president of the French Republic enjoys a somewhat peculiar position at the head of the state, without much real power. The theory at first adopted gave him a position similar to that of a constitutional monarch, above the party divisions of the Assembly and the ministers. When Marshal MacMahon (President from May, 1873, to January, 1879) undertook to interfere directly with the government, in behalf of conservatism, his course led to the suspicion that he proposed to restore the monarchy, and when he appealed to the people he was compelled to resign in the face of the overwhelming majority elected to the Chambers.

The administration of President Grévy, who followed MacMahon, was marked by important concessions to the radicals. A host of officials was discharged in favor of men of more advanced views, and even the law protecting judges from removal was suspended in order "to drive from the bench the enemies of the Republic." The country, as a whole, however, was more conservative than was the radical wing of the Republican majority. The radicals swept the elections, because of the lack of union among the conservative Republicans. Then came the tendency to turn toward some strong man who would maintain order, which led to the ridiculous demonstrations of Gen. Boulanger. Boulanger, who was minister of war from January, 1886, to May, 1887, proposed the revision of the constitution, but was so hazy in defining the nature of the revision proposed that he attracted the radicals on one hand and the Bonapartists, and reactionists, on the other, who hoped for the restoration of the Empire. The Republicans were aroused and united, and Boulanger badly beaten in the elections of 1889. The fact that the Royalists and the Bonapartists had given him support greatly reduced their strength with the people, and another fatal blow was dealt at reactionary plotting when Cardinal Lavignerie (November, 1890) declared that the church was not necessarily opposed to the Republican form of government in France. As the church had heretofore been allied with the reactionists, this declaration was of high significance, which was strengthened when the pope, in the spring of 1892, issued an encyclical letter to the same effect.

The tendency in France in recent years has been toward a more general recognition that the Republic has come to stay, and that those who desire orderly and conservative government must seek it under the Republic and through constitutional means rather than by agitation for the restoration of the monarchy. This sentiment of loyalty to the government is vital to the successful working of representative institutions, because party alignments on economic questions become difficult, and even of subordinate importance, when one or more of the existing parties is openly working for the overthrow of the form of government. The absence of two coherent and responsible parties with definite political programs, while due to other causes as well as to the irreconcilable hostility between the government and its enemies, has proved one of the most serious difficulties in the way of constitutional government in all the countries of the Continent. The lack of such parties takes away that full responsibility of the administration to the people which exists under the English and even under the American system, in spite of the absence in the latter of the responsibility of the ministers to the representative body. In France, and in most other Continental countries, there are no central party organizations and no party platforms. Each candidate for the chamber of deputies stands upon his own platform and seeks such political affiliations as he chooses after he enters the chamber. The French chambers have, therefore, remained split into small groups, which have made it difficult for any ministry to hold power

* "Governments and Parties in Continental Europe," Boston, 1897.

long without offending some one of the groups upon which it has relied for support. The evils which result are thus described by Mr. A. Lawrence Lowell:—

“The ministers are compelled to ride two horses at once. They must try to conciliate two inharmonious bodies of men, on pain of defeat if either of them becomes hostile; and hence their tenure is unstable and their course necessarily timid. Now the larger the number of discordant groups that form the majority, the harder the task of pleasing them all, and the more feeble and unstable the position of the cabinet. Nor is the difficulty removed by giving portfolios to the members of the several groups; for even if this reduces the labor of satisfying the parties, it adds that of maintaining an accord among the ministers themselves, and entails the proverbial weakness of coalition governments.”

This difficulty has hampered the free working of the parliamentary system in Germany, Italy, and Austria, as well as in France. The disposition to subordinate details to a common purpose, and ultimate ideals to practical results, has not yet been taught by years of healthy political life, as in Great Britain, and the United States. In Germany, the union of the National Liberals around Bismarck gave him for a time the support of a vigorous and united party, but they were not willing to follow him in some of his measures of repression against the socialists. It was this incident, coupled with growing antagonism between the old minister and the young emperor, that led to Bismarck's fall in 1890. The German *Reichstag* has recently contained members of no less than fifteen parties or groups, representing not only different political and economic policies, but conflicting local and race interests.

Cavour was able for a time to accomplish in Italy the same unity in support of his national policy that Bismarck accomplished in Germany. He relied at the outset upon the support of the moderates, but as the grandeur of his projects for the emancipation of Italy came to be understood, opposition faded away, and in the first Italian Parliament (elected in January, 1861) his supporters numbered 407 and the opposition only 34. His followers broke up after his death in the following June, and the later history of Italy has been a succession of short-lived ministries with little definite political aim. The condition of the Austrian *Reichsrath* has been much the same in respect to party divisions as the German *Reichstag* since the death of Bismarck. United party action has been prevented by the bitter conflicts which have repeatedly broken out between the representatives of different provinces and races.

In spite of these obstacles to the free working of popular institutions, constitutional governments have been established in nearly every European state. The degree of their responsibility, and the degree of interference by the sovereign with the action of the popular assembly, still vary greatly and may be the occasion of future conflicts. Perhaps the most advanced constitutional state in practice is Italy, who came so recently to her heritage of freedom. The sanction of the king is nominally required for laws passed by Parliament, but it is never refused. Certain treaties may be made without the assent of the chambers, but all are, in practice, submitted to Parliament. The king has power to declare war, to issue decrees, to create senators, and to dissolve the Chamber of Deputies, but all these powers are exercised in his name by the ministers, and no act of the government is valid without their signature. The ministers substantially direct the work of Parliament, and have a right to be present and to speak in either chamber. In Germany, the progress of constitutional government has not been so great. The chancellor is not compelled to resign on a hostile vote in the *Reichstag*, and Bismarck always insisted that he was responsible to no one but the emperor. The motto, which has obtained so firm a footing in Great Britain, “The king reigns but does not govern,” he declared had no application to the House of Hohenzollern. In Austria, conditions are somewhat the same. The constitution is more democratic in its language, declaring that the emperor governs by means of responsible ministers, and that all his acts must be countersigned by a minister. The incessant quarrels between

the different races in the *Reichsrath* have resulted, however, in a failure to form coherent parties, and have given to the emperor much freedom of action and control over public policy.

More potent in some respects than forms is the real power exercised by public opinion, informed by a free and enlightened press, throughout all the countries of Europe, even with some qualifications under the absolute government of Russia. Universal suffrage is the basis of the choice of the representative bodies in nearly every country where constitutions have been established. The Chamber of Deputies is elected in France by universal suffrage and by secret ballot, in which a majority vote, instead of a mere plurality, is required to make a choice. In Germany, the *Reichstag* is elected for five years by universal suffrage and secret ballot. In Italy, the suffrage was originally very restricted, but was broadened in 1882. Voters are still required to be able to read and write and to pass examinations on the subjects comprised in the course of compulsory education, but examination is not required in the case of the official and professional classes. In Austria, the upper house consists of the hereditary nobility, but the lower house is elected for six years by the provincial voters. The voters are divided into five classes, and they vote by classes rather than in territorial districts. The general class of voters includes nearly all men not in domestic service, while the provisions for the land-owning class, who are required to pay certain taxes, grant the right to vote to women and to corporations. Universal suffrage prevails in the choice of the lower chambers in Spain, Sweden, and Belgium, but in the latter country, supplementary votes are given to those who pay certain taxes.

While government which is responsible in form to the people has thus been established in nearly every European state, it is generally understood that the degree of real popular liberty and of the sanctity of the person and property of the individual under the law, differ greatly in different countries. The right of censorship of the press is still exercised in Prussia and in Austria as well as in Russia. In Austria, the permanent bureaucracy exercises great power over the rights of the citizens; public meetings are restrained, and, in spite of the guarantee of the fundamental law that expression of opinion shall be free and that there shall be no censorship of the press, orders are issued by the police to the newspapers to omit offensive articles or to refrain from discussing particular subjects. Upon the whole, however, the privilege of independent political action has become so well established in every country except Russia and Turkey, that serious abuse of the rights guaranteed to the citizen occurs only on rare occasions.

Some of the most striking steps in direct government by the people have been taken in Switzerland. Up to the close of the eighteenth century, such popular government as existed was by direct action, in general assemblies of the citizens. Even when representative government became well established, after the outbreaks of 1830, the people were jealous of their own officers, and sought to control them by direct action. Hence came the adoption of the veto and referendum. The submission of the law or a constitution to a popular vote was not an entirely novel expedient, but the systematic application of this principle, in the form of the veto, dates from 1831, when it was established in the canton of St. Gall. The veto involved the right of the people to refuse their consent by vote to any law passed by the legislature, and the member who proposed it had in mind the veto exercised by the Roman tribunes. The use of the veto was gradually extended until it was superseded by the referendum. This meant that upon certain classes of measures, the question whether the measure should be adopted or not, should be submitted to the direct vote of the people.

The use of the referendum extended rapidly soon after 1860. It was adopted in 1869 and 1870 by Zurich, Berne, Soleure, Aargau, and Thurgau, while Lucerne adopted it in an optional form. The example of these cantons was followed by others, until at

present all but Freiburg possess it in some form. The referendum was adopted by the Swiss Confederation, or central government, in an optional form in 1874, and has been frequently appealed to. All amendments to the constitution must be submitted to popular vote, while laws having a general application must be submitted upon the demand of 30,000 citizens or of eight cantons. The laws to which the referendum is applicable do not go into effect until ninety days after passage by the Assembly, in order to allow time to appeal to the referendum. The number of cases in which the referendum was employed from 1874 to November, 1895, was twenty, out of 182 laws to which it was applicable. Of these twenty laws the people ratified six and rejected fourteen. A good deal of intelligent discrimination is usually shown by the people in voting upon laws and constitutional amendments under the Federal constitution. A vote given in 1891, to amend the constitution so as to permit the formation of a federal bank of issue instead of the state banks, was followed, in 1897, by an emphatic rejection of a proposition for a bank owned and conducted by the state instead of by private enterprise. The French cantons generally voted against state ownership, and only the German cantons, where socialism had made progress, voted in its favor.

One of the crowning acts in the progress of popular rights during the nineteenth century was the abolition of the slave trade throughout the civilized world, the abolition in Europe of slavery and of the various forms of feudalism resembling slavery. The steps necessary to establish the freedom of the individual, his right to go and come at will, and to contract freely with his employer, were taken in Great Britain long before the nineteenth century. In Austria, in the middle of the eighteenth century, Maria Theresa liberated the peasants from the obligation to remain on the lands of their lords, and protected them against ejection, so long as they performed certain labor for the lord, on a fixed number of days, in payment of their rent. It remained for later monarchs, under the pressure of the revolutionary victories in France, to establish entire freedom for the individual in Austria. In Prussia, the work of emancipation was a part of the great program of Stein, who in the edict of October 9, 1807, abolished personal servitude, permitted the noble and the peasant to follow any calling, and abrogated the rule which prohibited land from passing into the hands of a class different from that to which it belonged. The peasantry of Poland had already been emancipated in a measure, but it remained for Alexander II., in 1864, to provide an equitable division of the land between peasant and lord as a means of arming the former against the latter in future struggles against Russian supremacy.

The emancipation of the serfs in Russia was one of the last great steps in the recognition of the rights of man in Europe, which immediately preceded the abolition of slavery in the United States. The condition of the Russian serfs was essentially that of slaves. This relationship existed not only on the feudal domains, but among the

artisans, who were required to pay an annual tribute to their lords and to go and come at their orders, and among the two mil-

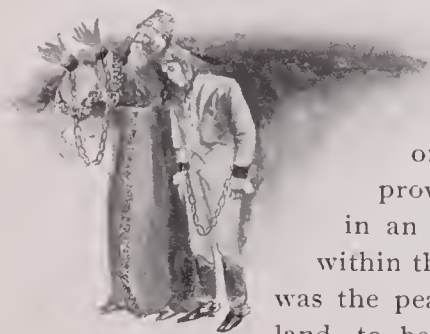
lion Russian men and women employed in personal services in the houses of their masters. The latter classes were liberated at

once without conditions. In the case of the peasants, more elaborate provisions for their future were made. This great reform was announced

in an ukase signed by Alexander II., on March 3, 1861, which was read within the next few weeks in every church of the Russian Empire. Not only

was the peasant liberated from his old fetters, but he was awarded a part of the land, to be paid for in small annual installments extending over many years.

Bonds were issued by the government to the landholders in order to compensate them at once for their losses, the amount thus allotted them reaching, from 1862 to 1891, a sum of 892,139,163 rubles (\$450,000,000).



The termination of the slave trade, with its nameless abominations, aroused strong popular support in Great Britain early in the century. The subject was one of those urged most strongly upon the Congress of Vienna in 1815, but Spain and Portugal strenuously resisted an agreement, and all that was obtained was a solid condemnation of the trade as contrary to the principles of civilization and human rights. When Napoleon returned from Elba in the spring of 1815, he abolished the slave trade in France and its dependencies, in the hope of placating the British Government. The abolition of slavery in the British West Indies took place in 1833, but many years passed before civilized nations united in effective measures for putting down the slave trade on the ocean. The United States was slow in joining the European nations in the severe measures necessary to carry out the mandate of the Federal constitution, which abolished the trade in 1807. The barbarism lingered on the African coast even down to the close of the nineteenth century, when several conferences at Brussels resulted in a comprehensive organization for stamping out the evil. Naval vessels were ordered to cruise on the African coast and each of the great powers waived the privilege of the flag and granted the right of search by the vessels of any other power. The United States had long resisted the assertion of the right of search, but the Senate ratified the Brussels treaty on January 11, 1892, and the final act of the century was performed for putting an end to the servitude of human beings.

Liberal Republican Party.—A defection from the regular Republican organization in 1870-72. The party was opposed to the strict measures of coercion adopted by the administration to maintain the newly granted rights of the freedmen, reconstruct the Southern States, and stamp out disorder in the South. Uniting with the Democrats in Mo. in 1870-71 it advocated universal suffrage, universal amnesty, a reform of the tariff, and a "cessation of unconstitutional laws to cure Ku-Klux disorders." At a national convention held in Cincinnati in May, 1872, the Liberal Republicans nominated Horace Greeley for President and B. Gratz Brown, of Mo., for Vice-president, in opposition to Grant, who was the candidate of the "straight" Republicans for a second term. Greeley and Brown were indorsed by the Democrats, but many members of that party were thereby alienated and they nominated Charles O'Connor, of N. Y. for President. Grant was reelected by an overwhelming majority.

"Liberator, The."—A paper started in Boston, in 1831, by William Lloyd Garrison. Its purpose was to advocate the abolition of slavery in the south and it exerted a wide influence in promoting the agitation that culminated in secession and the Civil War. (See GARRISON, WILLIAM LLOYD, 222.)

Liberia.—A negro republic on the west coast of Africa; founded by the American Colonization Society in 1822. The society sent about 18,000 persons to this colony. Liberia remained under the rule of the directors of the society until 1847, when the republic was established; area estimated at 48,360 sq. miles; total population, about 1,500,000, mostly natives.

Liberty Bell.—The bell on the old Pennsylvania statehouse at Philadelphia, which, on July 4, 1776, was rung to announce the signing of the Declaration of Independence. It was cast in

London and sent to Philadelphia in 1752. The bell was broken up and recast in April and again in June of the following year. It was cracked July 8, 1835, while being tolled in memory of Chief-justice Marshall. It was exhibited at the Centennial Exhibition in Philadelphia, in 1876, and at the Columbian Exposition at Chicago in 1893. It bears the motto "Proclaim Liberty throughout the land unto all the inhabitants thereof." It is now in Independence Hall, Philadelphia.

Liberty Cap, Significance of.—The Cap of Liberty worn in the Roman States in early days by liberated slaves was made like a cowl, according to a coin of Brutus, after the death of Cæsar. It was made of red cloth. After the murder of Cæsar, Brutus and his rebels adopted the red cap as a token of republican sentiments.

Liberty Enlightening the World.—A colossal figure made of plates of bronze on an iron framework, occupying a commanding position on Bedloe's Island, New York Bay. It represents a woman, draped in Greek mantle and tunic, holding aloft a torch in her right hand. The height of the statue is 151 feet; the pedestal 155. It was designed by the French sculptor, Bartholdi, as a gift from the people of France to the U. S. The pedestal, designed by Richard M. Hunt, was paid for by popular subscription in the U. S.

Liberty Gap.—A pass in the mountains of central Tenn., about 50 miles southeast of Murfreesboro. Here took place, June 25, 1863, the principal engagement of the Tullahoma campaign, between McCook's corps of the Union army, under Rosecrans, and the Confederate army of Bragg. The fighting was very severe and resulted in the gap being carried by McCook. This was followed by the retreat of the Confederates. (See TULLAHOMA CAMPAIGN.)

Liberty Party.—See CHASE, SALMON PORTLAND, 108.

Liberty Pole.—Trees, green boughs, or poles set up as symbols of liberty came into vogue during the American Revolution. The custom of placing trees of liberty crowned with a "bonnet rouge" (red bonnet or cap) became common also during the French Revolution as a revolutionary symbol among the Jacobins. Every village in France then had its tree crowned with a cap of liberty, around which the people danced, singing revolutionary songs as the English people used to sing around the May Pole. During the Empire the custom was suppressed, but it revived again in 1830, and again in 1848. In Italy, during the uprising of 1848-49, trees of liberty were also erected. The Liberty Pole in use in our own Revolution was a tall mast, with a Phrygian cap of liberty at its top, set up by the "Sons of Liberty" and the patriots who supported the American cause. Upon these masts the people of that time unfurled banners upon them inscribed "The King, Pitt, and Liberty," and called it Liberty Pole. They became objects of contest between citizens and the British troops, especially in Boston. After the repeal of the Stamp Act, which naturally caused great rejoicing, New York was illuminated in the evening and bonfires blazed, while the heavens were brilliant with fireworks.

Liberty Tree, The.—An elm-tree formerly standing on Washington St., Boston, during the Stamp Act excitement. Those who gave offense were hung upon it in effigy.

Libra (The Scales).—See CONSTELLATIONS, 3003.

Library, or Living-room, The.—2187.

Library of Congress.—When the seat of government was removed to Washington, in 1800, the idea of a Congressional Library was conceived. During the following year, John Randolph made a report which formed the basis of an act of Congress of 1802, organizing the library. About 3,000 books of reference had been accumulated when, in Aug., 1814, the British army burned the capital and the library was consumed. In 1815 Congress purchased the private library of Thomas Jefferson, consisting of 6,700 volumes for \$23,950. An annual appropriation was made for the purchase of books, and the library continued to grow until in 1851 it numbered 55,000 volumes. Dec. 24, of that year, a second conflagration destroyed 35,000 of these volumes. An appropriation of \$72,000 was made for repairs and the library grew apace. In 1866, 40,000 volumes were transferred from the Smithsonian Institution. The following year Congress purchased for \$100,000 the historical collection of Peter Force, rich in Americana. This library contained nearly 60,000 books, pamphlets, and manuscripts. In 1864 President Lincoln appointed Ainsworth R. Spofford to be librarian, and he was succeeded in 1897 by John Russell Young, who died in 1899, and Herbert Putnam was appointed his successor. The library now contains 840,000 volumes, besides a very large collection of pamphlets, maps, engravings, etc. The present library building was begun in 1886 and completed in 1895, at a cost of

\$6,360,000. It is the most beautiful building in the U. S., and ranks high among the fine structures of the world. It occupies an entire square, near the Capitol, and east by south therefrom.

Library, The Use of a.—3196.

Libyans.—An ancient maritime nation, inhabiting the north coast of Africa. Previous to the time of Thothmes III. they greatly harassed the Egyptians. They were later crowded back by the Romans and relapsed into barbarism.

Lichens.—2933.

Lichfield.—A city of Staffordshire, England; it has a fine cathedral dating from the 13th century. The birthplace of Samuel Johnson. Pop., about 8,000.

Licking.—A river in Ky., about 200 miles in length.

Lick Observatory.—On the summit of Mt. Hamilton, in Santa Clara Co., Cal. An observatory founded and endowed by James Lick (1796-1876)

Lie (Lø), Jonas Lauritz Edemil.—Born, 1833. A noted Norwegian novelist, and playwright.

Liebig, Baron Justus von.—(1803-1873.) A celebrated German chemist, and professor of chemistry.

Liège.—(1) A province of Belgium. (2) The capital of the province of Liège; noted for its manufacture of firearms, engines, etc., and an important mining center. Pop. (1899), 171,031.

Lien.—A hold or claim on property to secure a debt.

Lieutenant-general.—In the U. S. army, the rank next below that of general, and next above that of maj.-gen. It was first authorized in 1799 and was conferred on George Washington. It lapsed at his death, and was not revived until 1858, when Winfield Scott was brevetted lieutenant-general. At his death it again lapsed. In 1864 it was revived by special act of Congress and conferred upon Ulysses S. Grant, on whose promotion to the grade of general, created in his behalf in 1866, William T. Sherman became lieutenant-general, and on his succession to the rank of general, Philip H. Sheridan was promoted to be lieutenant-general. At his death in 1888 the office became extinct, but was revived in 1895 for John M. Schofield, and later for Nelson A. Miles.

Life, Enthusiasm the Soul of.—4248.

Life, Ideals the Measure of.—4714.

Life, Making a.—4201.

Life, Training for Larger.—4604.

Lifeboat, Who Invented It.—The invention of the lifeboat is claimed for Lionel Lukin, to whom a monument, recording it, has been erected at Hythe, in Kent. A patent was granted to him for it in 1785, but there is no record of any boat having been built from his design. In consequence of the ship "Adventure," with all its crew, being lost at the mouth of the Tyne, in September, 1789, in the presence of thousands of helpless spectators, a reward for a lifeboat was offered by a committee at South Shields, in the County of Durham, and was obtained by Henry Greathead, of that town, for which he also received \$6,000 from Parliament, a gold medal from the Society of Arts and from the Royal Humane Society, and a purse of 100 guineas from Lloyd's Shipping Insurance Com-

pany, whose members voted \$10,000 to encourage the building of lifeboats on different parts of the coast. The National Lifeboat Institution was founded in 1824, and has now 304 lifeboats on the coasts of the United Kingdom.

Life-Builder, Thought The.—4648.

Life Insurance, Some Rules for Success in.—5319.

Life Insurance, To Succeed in.—5312.

Life of Labor, The Joy of a.—4544.

Life-Saving Dog, The.—SEE ANIMAL STORIES, 2734.

Life-Saving Service.—Life-saving stations are established on all the sea and lake coasts of the U. S. This branch of the public service, as now main-

tained, was organized by Sumner I. Kimball in 1871 and is attached to the Treasury Dept. The coast line of the U. S., which is 10,000 miles in extent, is laid off into districts, each of which is governed by a local superintendent. The stations are located at points liable to wrecks, at an average distance of five miles apart, and are fitted with every appliance for saving life. Each station has a keeper and seven or eight professional surfmen. The value of this service is inestimable, and for its size no other corps in the world can equal its record.

Life Tonic, Cheerfulness the Great.—4300.

LIGHT

WHAT IS LIGHT?

IN THE preceding article on Heat, you were told that the transmission of heat by radiation would be more fully explained when we came to speak of light. The reason for postponing the explanation was that it is really not the heat, but the light, that is radiated. When light falls upon bodies it heats them, and the heat, so produced, is said to have been radiated.

To explain how light comes to us from the sun, we must suppose one of two things, either that light is composed of exceedingly small particles, that travel all the way from the sun, and enter our eyes, or that there is some substance, occupying the space between the earth and the sun, that transmits light. For many reasons, the latter supposition is the one that is now believed. The space between the earth and the sun and, in fact, all space, is thought to be filled with an exceedingly elastic and perfectly transparent substance, that is called ether. The nature of this ether is such, that it is believed to penetrate all of the ordinary substances with which we are familiar, and to fill the spaces between the molecules, of which they are composed. Even liquids, and hard solids, like iron and glass, have spaces between their molecules, into which the ether penetrates.

On account of its great elasticity, ether can easily be thrown into very slight and extremely rapid vibrations, which it transmits, in all directions, with a speed so great that it is almost impossible for us to form any conception of it. Some of the vibrations of the ether have the property of acting upon our eyes, so as to produce the sensation of sight, and these vibrations are called light.

By methods, too complicated for description here, the speed with which light waves are transmitted through the ether has been measured many times, and it has been found to be about 186,000 miles a second. At this rate, eight minutes are required for the transmission of light from the sun, and one and one-third seconds for the transmission of light from the moon.

HOW LIGHT IS PRODUCED

Having learned what light is, let us now see how it is produced. You have been told that ether penetrates all substances, and fills the spaces between their molecules, consequently, when the molecules of bodies are thrown into vibration, the ether between them must also be made to vibrate, and when the vibrations become sufficiently rapid, they produce the sensation of sight. It has also been said, that when the molecules of bodies are thrown into rapid vibration, the bodies become hot, and we find that the converse is true, that is, in hot bodies the molecules are always in rapid vibration, and

the hotter the body, the more rapid the vibration of its molecules. Naturally, then, we should infer, that when bodies become very hot, they ought to give off light. This we know from experience is true, and almost all the light we have is given off by hot bodies. The sun, from which almost all our light is derived, is so hot, that it is surrounded by the gases of many substances that exist as solids on the earth. Among these are the metals sodium, potassium, magnesium, and iron.

There are a few sources from which light is obtained without being produced by any considerable amount of heat. The lightning bug, or firefly, for example, seems to produce light that is accompanied by little or no heat; but men have not yet found out how this is done, and practically all of the artificial sources of light require the production of heat before light can be obtained. Only those vibrations of the ether that have a certain degree of rapidity can affect the eye and produce sight and, for this reason, comparatively little light is given off by substances that are heated until they glow. They are like a piano player who sounds all of the lower notes on the piano, in order to get up to one of a certain pitch.

RAYS OF LIGHT

Whenever vibrations are set up in the ether, at any point, they are transmitted along straight lines in all directions, from the point of which they were produced. A

single line of vibrating particles, in the ether, is known as a *ray*. A number of rays, that are emitted from one point, are said to form a *pencil*. A pencil of light may be produced by holding near a candle a screen, that has a round hole in it. Sometimes rays of light are brought together in a point, as may be done by means of a burning glass, and one of these bundles of rays is known as a *convergent pencil*. The pencil shown in Fig. 1 is a *divergent pencil*, in which the

rays are caused to diverge or separate.

A bundle of rays that lie parallel to each other forms a *beam*. (Fig. 2.) The rays that come to us from the sun are practically parallel, hence are said to form beams.

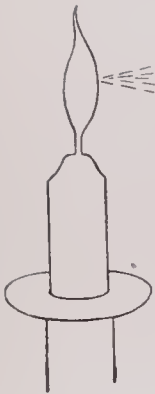


Fig. 1

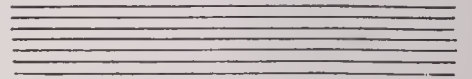


Fig. 2

SHADOWS

When a screen, through which light cannot pass, is placed in the path of light rays, the space beyond the screen is not lighted, and is called a *shadow*. This is shown

in the diagram (Fig. 3), in which P is the point from which the rays start, and S is a screen placed in the path of the rays. The dark space beyond S is the shadow produced by the screen. The edges of a shadow that is formed by placing a screen in the path of rays from a single light-giving point are sharp and clearly marked. Such shadows are produced

by electric arc lights. Most sources of light are of larger size than the arc lights, and the shadows produced by them are not so clearly defined. In Fig. 4, L represents a light-giving body, and S is a screen. Rays of light coming from the top of the body T are excluded from the space between points B and D, but they reach the space between A and B. On the other hand, light from R, the bottom of the luminous body, is excluded from the space between A and C, but illuminates the

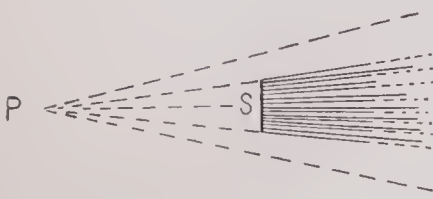


Fig. 3

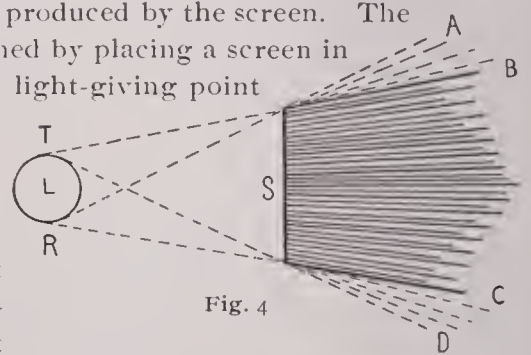


Fig. 4

space between C and D. Consequently, the space between B and C receives no light at all from the body L, and, in spaces A B and C D, the light is partly excluded. The space from which all the light is excluded is called the *umbra*, and the surrounding space, from which part of the light is excluded, is called the *penumbra*. The lines that separate the umbra and penumbra are never clearly defined, so the exact limit of a shadow formed by a luminous body cannot be determined.

Eclipses are merely shadows on the surface of the earth, formed by the passage of the moon between the sun and the earth, or formed on the surface of the moon, by the passage of the earth between the sun and moon. The former is commonly known as an eclipse of the sun, and the latter as an eclipse of the moon.

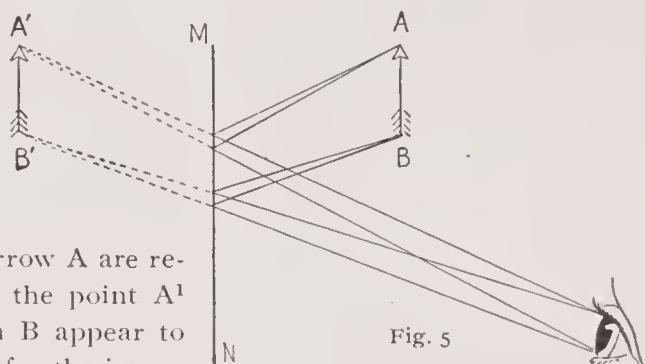
THE REFLECTION OF LIGHT

We know that when light falls on smooth, polished surfaces it is reflected by the surface, so as to appear to come from some point behind it. If we take the trouble to note the angle made at the surface by the ray that strikes it, and also the angle made by the reflected ray, we shall find that the two angles are equal. That is, "the angle of incidence is equal to the angle of reflection." This same rule was found to apply to the reflection of sound waves. There is this difference, however, between the reflection of light and of sound: sound waves are reflected from rough surfaces as well as from smooth, but light waves are reflected only from smooth and polished surfaces, such as the surface of a mirror or of still water.

You may have wondered how images are formed in mirrors, and, unless you know something about the behavior of light, this is difficult for you to understand. By reference to the diagram (Fig. 5), however, you should now be able to understand it without great difficulty.

The rays of light coming from the point of the arrow A are reflected at the mirror, MN, and appear to come from the point A¹ behind the mirror. In the same way the rays from B appear to come from B¹. If you were to look behind the mirror for the image A¹B¹ it could not be found. For this reason it is called an *imaginary*, or *virtual*, image.

The images formed by flat or plane mirrors are always virtual images, and they are of the same size as the object. If light from an object falls upon the surface of a curved mirror, the image produced is either larger or smaller than the object, and it may be imaginary, like those in plane mirrors, or it may be a real image, that is, an image that will be formed upon a screen, if it is held in the proper position. The formation of images in curved mirrors would form an interesting subject for study, but their description would require too much space to be inserted here. You may get some idea of how the curved surface of a mirror affects the images produced in it, by looking at the image of yourself that is produced in the inside of a polished watch case. The inside of the outer case is concave, while the outside of the inner one is convex, and, in the former, you see a magnified image of yourself and, in the latter, the image is reduced in size.



THE REFRACTION OF LIGHT

By the refraction of light is meant a bending of the rays. It is most frequently observed when light passes from air into some other transparent body, or from some transparent body into air. You have seen an illustration of refraction, when a stick

has been thrust into a pool of water, or when you have put a spoon into a glass of water. The bending of the spoon, or stick, that seemed to take place at the surface of the water, was due to a bending of the light rays that came to your eye, from the part of the spoon or stick that was covered by the water. The same thing may be shown by holding a thick piece of glass, obliquely, between your eye and a pencil, in such a way, that

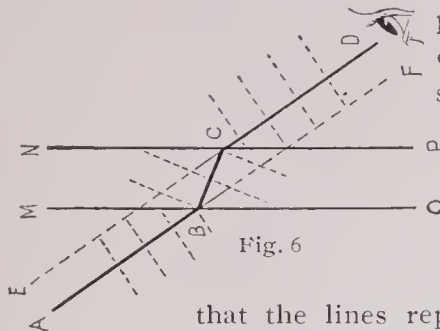


Fig. 6

part of the pencil is seen through the glass and part through the air only. The part seen through the glass will appear to be shifted to one side, and the pencil seems to be broken at the edge of the glass. The reason for this peculiar appearance may be understood from the diagram (Fig. 6), in which the parallel lines, M O and N P, represent the sides of a piece of glass. The heavy line, A B C D, represents the path of a ray of light through the glass. The small cross lines represent the front of the wave of light. You will notice that the lines representing the wave front, while it is traveling through the glass, are not parallel to those representing the wave front, outside the glass. This is due to the fact that the light wave cannot travel so rapidly through glass as it does through air. You see that the wave strikes the glass obliquely, and one side of the wave front enters the glass before the other does. The part of the wave that enters first has to travel more slowly than the part that is still traveling through the air, and, consequently, by the time the other side of the wave enters the glass, the side that entered first has gone only a short distance. The wave front has accordingly been turned out of its former position, and into the position shown, by the lines inside the glass. When the farther side of the glass is reached, the side of the wave that entered the glass first emerges first, and as it travels faster through air than through glass, it swings around, before the other side of the wave emerges, until the wave front is restored to a position parallel to the one it occupied before it entered the glass. While the course of the wave is then parallel to the course followed by it, before entering the glass, it does not return to its original course, and, if it enters the eye of a person at D, it seems to have come from E, instead of A, the point from which it started. If a pencil were at A, therefore, the part seen through the glass would seem to be at E, and the part seen through the air would be seen at A, causing the pencil to appear to be broken at the edge of the glass.

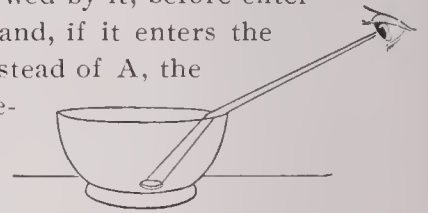


Fig. 7

A simple experiment that shows very clearly the bending of light rays by water is illustrated in Fig. 7. Drop a coin into a china bowl, and raise the bowl until its rim hides the coin. Then pour in water, and when the bowl is nearly full the coin will come into view.

If a ray of light is made to pass through a triangular prism of glass of the form shown in Fig. 8, the ray, on emerging from the prism, does not come back into a course parallel to its original course. Instead, it is always bent toward the base

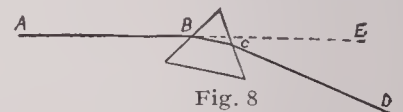


Fig. 8

of the prism. Thus, the ray A B, instead of going on to E, passes through the prism along the line B C, and, on emerging, travels along the line C D. If, instead of a prism, the light passes through a circular piece of glass, called a lens, which is thicker in the middle

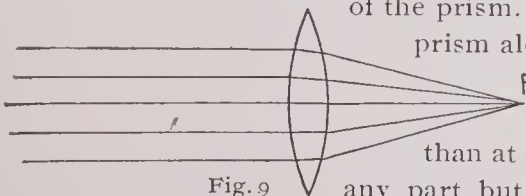


Fig. 9

than at the edges, such as is shown in Fig. 9, the rays that pass through any part but the center are bent out of their courses and turned toward the center. Parallel rays are so much refracted by a lens of this kind that they are brought together at a point F, called a *focus*. If the sun's rays, which are parallel, are brought together in this way, they may produce heat enough to set fire to

paper, or, if the lens is large enough, even to wood. This property of the lenses, of the shape shown, has caused them to be called *burning glasses*. If you place a piece of paper at the focus of the lens, and look at it, before the heat of the converged rays has had time to set fire to it, you will see a small and very bright image of the sun.

The sun, however, is not the only object whose image may be obtained by means of such a lens. If you will hold a lighted candle, on one side of the lens, and a sheet of paper on the other, by moving the paper back and forth, until the proper point is reached, you will obtain an image of the candle. (See Fig. 10.) This image will be turned upside down, or inverted, and it will be smaller than the candle, if the screen is nearer to the lens than the candle, and larger, if the candle is nearer the lens.

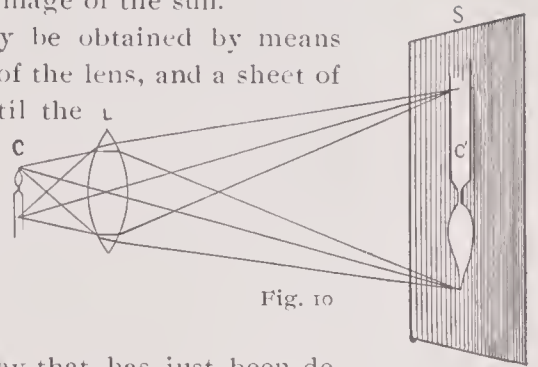


Fig. 10

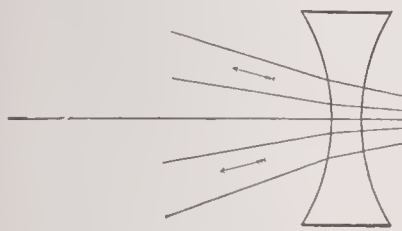


Fig. 11

The course of rays passing through a concave lens is shown in Fig. 11. The images produced in the way that has just been described are real images, because they are actually formed on screens, but lenses also produce virtual, or imaginary, images. If you take a convex lens, of the kind we have been talking about, and hold it close to some small object, on looking through the lens, you will see an enlarged image of the object; but, on trying to produce it on a screen, you will find that

the image is imaginary. This imaginary image will not be inverted, like that formed on the screen. When a lens is used in this way, it is called a *magnifying glass* or *simple microscope*. The term microscope is applied to instruments used for viewing small objects.

SOME OPTICAL INSTRUMENTS

By optical instruments are meant those instruments, in the use of which light plays an important part, such as the photographic camera, the microscope, the telescope, the magic lantern, spectacles, and the eye itself. In all of those just mentioned lenses are employed to form images.

The photographic camera (Fig. 12) consists essentially of a box, B, that has a lens, L, in one side. The side, G, opposite the lens is usually made movable, so that it can be drawn closer to the lens, or removed further from it, as desired. When the lens is uncovered, light enters through it and strikes upon the opposite side. By adjusting this side, which is commonly called the "back," an image of the objects in front of the lens will be produced. This image, like that obtained with the candle and the screen, is inverted, and it is formed in the same way. The only use of the box of the camera is to

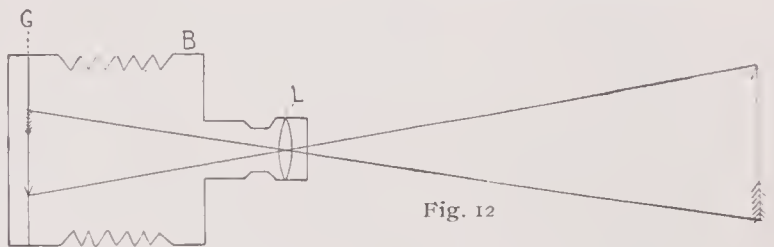


Fig. 12

exclude all light, except that which comes through the lens. A telescope (see Fig. 13), is an instrument used for viewing distant objects. In its simplest form it consists of a tube provided at one end with a large lens, O, for forming an image of the distant object, and at

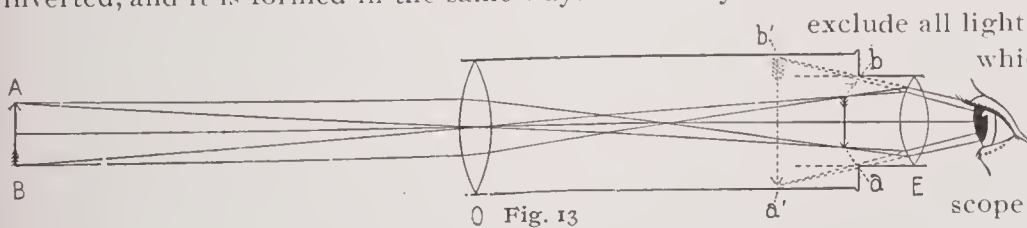


Fig. 13

exclude all light, except that which comes through the lens. A telescope (see Fig. 13), is an instrument used for viewing distant objects. In its simplest form it consists of a tube provided at one end with a large lens, O, for forming an image of the distant object, and at

the other with a smaller lens, E, for magnifying the images formed by the large lens. The large lens, which is turned toward the object, is called the *objective*, and the small lens is called the *eyepiece*.

Microscopes are of two kinds, simple, and compound. The simple microscope, as has already been stated, consists of a single convex lens. A compound microscope (see Fig. 14), resembles a telescope in having an objective and an eyepiece, but the objective of a microscope is a small lens adapted for use with very small objects, and it not only forms an image, but also magnifies it. The eyepiece in a microscope acts in the same way as the eyepiece in a telescope.

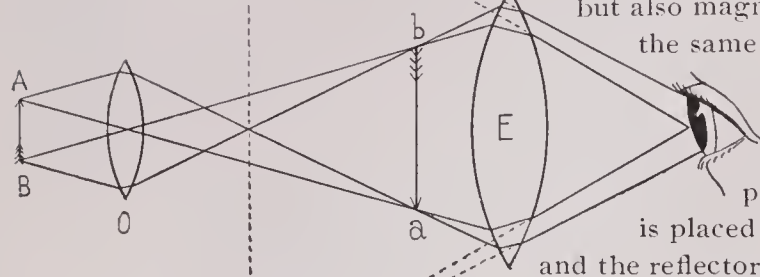


Fig. 14

the light through the picture, an enlarged image of the picture will be formed, on a screen placed at a proper distance in front of the lens.

The eye (Fig. 16) is a most interesting optical instrument, and in many ways it resembles a photographic camera.

In front it has an opening called the pupil, through which light is admitted, and this is so constructed that it can be enlarged in weak light, or contracted in strong light by means of the iris, X. Behind the pupil lies a lens, L, that forms an image upon the back part of the eye, R, that is called the retina. The back part of the eye cannot be made to approach the lens and withdraw from it, like the back of a photographic camera, in order to form images of objects at different distances, but we know from experience that the eye adjusts itself to different distances almost instantly. This adjustment is accomplished by a change in the lens. The lens in the eye is not a hard, unyielding body, like the glass lens in a camera, but is a soft, yielding substance, that can be made flatter or more curved by a very slight increase or decrease of the pressure on it. For the formation of clear images of distant objects the lens must be flattened somewhat, while for those very near its curvature is increased. These changes are brought about by tiny muscles within the eye, which act so quickly and so easily that we are entirely unconscious of their action.

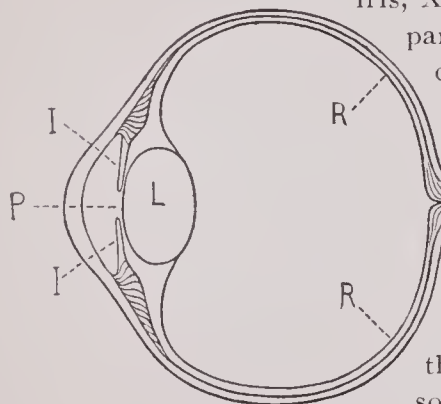


Fig. 16

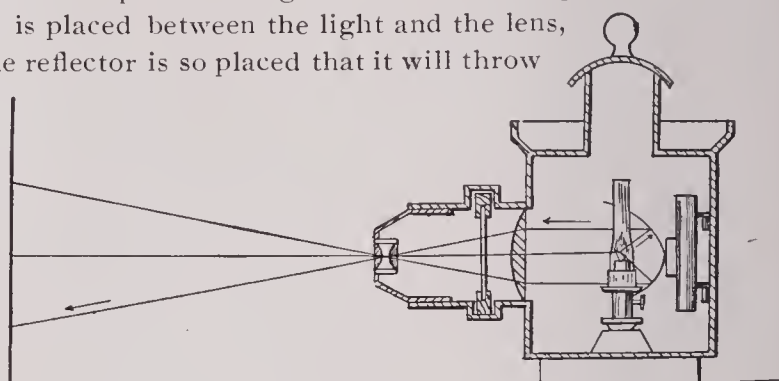


Fig. 15

THE RAINBOW AND THE SPECTRUM

As often as you have seen a rainbow, it may never have occurred to you, that you have to stand in a certain position in order to see it, and you probably cannot tell how it is produced. Of course, you know that the rainbow cannot be seen, unless the sun is shining and there are little drops of water in the air. The drops need not be raindrops, for rainbows can be seen in the mist at Niagara Falls, whenever the sun is shin-

ing, and you may produce a small rainbow with a hose. All that is necessary, is to stand with your back to the sun and throw the water into the air in front of you, in the form of spray. The light from the sun enters the small drops of water, is reflected inside the drops, and comes back to your eyes, but instead of white light you now see red, orange, yellow, green, blue, indigo, and violet. These colors are known as the *seven colors of the spectrum*.

Drops of water are not the only means whereby white light may be broken up into these seven colors. If sunlight is allowed to pass through a triangular prism, such as that already described, the same thing is observed. And, when the position of the different colors is noted, they will be found as they appear in Figure 17, the violet being refracted more than the others, and the red least of all. From the behavior of white light, when passed through a prism, we conclude that it is a mixture of colors that are always present, but cannot be distinguished by the eye, because they all reach it together. This view is strengthened by the fact, that by placing a second prism, in the reverse position beyond the first, we can bring the separate colors together again and reproduce white light. Other experiments, too complicated for description here, have proved that the different colors of the spectrum are produced by light waves having different rates of vibration, the violet rays having the highest rate and the red rays the lowest. Color in light is, therefore, closely related to pitch in sound. In luminous bodies, like the sun, the ether waves produced have many different rates of vibration, and they have wave lengths that are correspondingly different. These waves are all transmitted through the ether together, but, when they pass through a prism, the waves of different lengths are separated, because they are not refracted to the same extent.

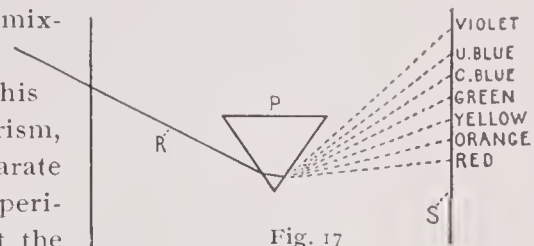


Fig. 17

Besides the waves that produce the colors shown in the spectrum, there are other waves of ether sent to us from the sun, some of them having more rapid vibrations, than the violet rays, and some slower vibrations, than the red rays. Our eyes are not so constructed that these rays have any effect upon them, however; hence such rays are called *invisible rays*.

COLOR IN BODIES

When we are in a dark place all objects look black. In pure red light, they would look red or black. The color of an object always depends upon the color of the light to which it is exposed. In white light all colors are possible, because it is composed of all the different colors. When white light falls on an object, it may be either reflected or absorbed. Generally, part of it is reflected and part absorbed. Different substances have different capacities for absorption, some absorbing more of one color, and others more of another. When a body readily absorbs red, it will appear green; when it absorbs green, more than any other color, it will appear red. Those bodies, that absorb yellow, most easily appear blue, and *vice versa*. Bodies that reflect all the colors appear white, and those that absorb all the colors are black. Colors related to each other in the way that red is to green, and yellow to blue, are called *complementary colors*, because when they strike the eye at the same time they produce the sensation of white.

- Light Brigade, The Charge of.**—At Balaklava, the famous charge of the Light Brigade (670 men) under Lord Cardigan, on a Russian battery, Oct. 25, 1854. The subject of Tennyson's well-known poem.
- Lighterage.**—Payment for unloading ships by lighters.
- Light-Horse Harry.**—A nickname of the cavalry commander Henry Lee, in the Revolutionary War. (See LEE, HENRY.)
- Lightning Rods.**—Ben Franklin used the first lightning rods in 1752.
- Lignum Vitæ.**—The wood of *Guaiacum Officinale*, grown extensively in the West Indies. It is remarkably hard and tough, and is used for manufacturing and medicinal purposes.
- Li-Hung-Chang.**—(1823-1901.) The most noted Chinese statesman of the 19th century. He began life as a hostler in a wayside inn, and rose by his talents to the highest station. After the reverses of the Chinese army in the war with Japan, he was degraded, but was presently made high commissioner, viceroy, and prime minister. He was highly esteemed by General Gordon and General Grant, the latter of whom ranked him as one of the four great statesmen of the world.
- Lilac.**—A genus of plants belonging to the order *Oleaceæ*; a native of Persia, and was first brought to Europe by Busbecq. It is one of the commonest ornamental shrubs cultivated in Europe and America.
- Liliuokalani.**—Born, 1838. The ex-queen of the Hawaiian Islands, sister of King Kalakaua.
- Lille, formerly L'Isle.**—In France, the capital of the department of Nord; an important fortress and a great manufacturing center; one of the leading French cities. Pop. (1896) of the city, 216,276.
- Lily, William.**—(1468-1522.) A renowned English grammarian, and one of the leading Greek scholars of his day.
- Lily of the Valley, The.**—2917.
- Lima.**—The capital of Peru, and its most important commercial center. Pop. (1891), 103,556.
- Limerick.**—The capital of County Limerick, Munster, Ireland. It is an important river port and a town of much historical interest. Pop. (1901), 45,806.
- Limestone.**—See ROCKS AND MINERALS.
- Limited Companies** are commercial organizations which limit the extent of liability that stockholders can incur.
- Limoges.**—In France, capital of the department Haute-Vienne. Celebrated for its porcelain manufactures. See p. 2395. Pop. (1896), 77,703.
- Lincoln.**—(1) The capital of Logan Co., Ill.; the seat of Lincoln University; pop. (1900), 8,962. (2) The capital of Neb., and of Lancaster Co.; seat of the state university; grain and cattle interests. Pop. (1900), 40,169.
- Lincoln.**—The second maritime county of England; it has important agricultural interests. Pop. (1901), 498,781.
- Lincoln, Abraham.**—Sixteenth President; sketch of, 368.
- Lincoln, Benjamin.**—(1733-1810.) A general of the Revolution; was Secretary of War (1781-84), and suppressed Shays's rebellion in 1787.
- Lincoln, Mount.**—A peak of the Rocky Mountains in Col.; a meteorological station occupies the summit. Height, 14,297.
- Linden, or Lime, The.**—2827.
- Linden Tree, The.**—2826.
- Lindsay, or Lyndsay, Sir David.**—(1490-1555.) A Scottish poet and patriot, a reformer before the Reformation.
- Linen, Care of.**—2295.
- Linnæus, Carolus (KARL VON LINNÉ).**—(1707-1778.) A celebrated Swedish botanist and naturalist; founder of the Linnæan system in botany.
- Lion, The.**—2466.
- Lippi, Fra Filippo.**—Italian painter; 3412.
- Lippincott, Mrs. (SARA JANE CLARKE); pen-name GRACE GREENWOOD.**—Born at Pompey, N. Y., 1823. An author and poet.
- Liquidambar, The.**—2860.
- Liquidation.**—Settlement of liabilities.
- Lisbon.**—The capital of Portuga; it has important commercial interests and is an important steamer terminus. Pop. (1890), 307,661.
- Lister, Sir Joseph (Lord).**—Born, 1827. An eminent English surgeon; discoverer of the antiseptic treatment in surgery.
- List of Books for Mothers.**—649.
- List of Toys.**—760.
- Liszt, Franz.**—(1811-1886.) A celebrated Hungarian composer, and one of the greatest pianists the world has known.
- Literary Clubs.**—2226.



LITERATURE

- Literature, Classical and Romantic.**—3170.
- Literature, Historic Basis of.**—3158.
- Literature, Inner World of.**—3162.

- Literature, Modern.**—3167.
- Literature as an Expression of Life.**—3156.
- Lithuania.**—Formerly a grand duchy in central Europe. In 1501 it united with Poland. It is now a province of Russia.
- Litmus.**—A popular coloring matter obtained from several lichens, but principally from *Lecanora Tartarea*, found in the south of Africa. The chief use is in the detection of acids or alkalies in chemistry. Acids turn blue litmus red, and alkalies turn red litmus blue. The most convenient method of administering the test is by means of strips of blotting-paper saturated with the juice and then dried. Such are called test-papers.
- Littell, Eliakim.**—(1797-1870.) A well-known publisher; founder of "Littell's Living Age."
- Little Giant.**—A name popularly given to Stephen A. Douglas.
- Little Mac.**—A nickname applied to Gen. George B. McClellan, by the soldiers of his army.
- Little Magician.**—A popular name of Martin Van Buren.
- Littlepage, Cornelius.**—A pseudonym used by James Fenimore Cooper when he wrote "Satanstoe."
- "Little Phil."**—A familiar name given to Gen. Philip H. Sheridan by his soldiers.
- Little Rock.**—The capital of Arkansas; a railway and industrial center, the seat of several important educational institutes. Pop. (1900), 38,307.
- Little Round Top.**—The name of a high, rocky knob, the struggle for the possession of which occasioned some of the fiercest fighting at the battle of Gettysburg, July 1, 2, and 3, 1863. (See GEORGE G. MEADE.)
- Litré, Maximilien Paul Emile.**—(1801-1881.) A French philologist, journalist, and philosopher. After the death of Auguste Comte, he was recognized as the head of the positivist school of philosophy. Elected to the Academy 1871.
- Livermore, Mary A.**—Born, 1821. American writer and lecturer on woman's suffrage, temperance, etc.
- Liverpool.**—In England; the world's chief seaport, and one of its greatest trade centers; it has numerous manufacturing interests and is extensively engaged in shipbuilding and in marine commerce. Pop. (1901), 684,947.
- Liverworts.**—2935.
- Livingston, Brockholst.**—(1757-1823.) A jurist, son of William Livingston. He was a judge of the U. S. Supreme Court (1806-23).
- Livingston, Phillip.**—(1716-1778.) One of the signers of the Declaration of Independence, as a member of Congress from N. Y.*
- Livingston, Robert R.**—(1746-1813.) A statesman and jurist. He negotiated the Louisiana Purchase in 1803 and was associated with Fulton in promoting steamboat navigation.
- Livingston, William.**—(1723-1790.) A politician, brother of Philip Livingston. He was governor of N. J. (1776-90), and a member of the Constitutional Convention in 1787.
- Livingstone, David.**—Born near Glasgow, Scotland, 1813; died at Chitambo, in central Africa, 1873.
- A celebrated African explorer and medical missionary.
- Livy (TITUS LIVIUS).**—Born, 59 B.C.; died, 17 A.D. A celebrated Roman historian, the greatest prose writer of the Augustan period.
- Lizard, The.**—2643.
- Llama.**—2481.
- Llanos** are vast plains in the north of South America, partly covered with tall, luxuriant grass and stocked with large herds of cattle. The llanos resemble the prairies of North America.
- Lloyd's.**—A famous shipping-insurance corporation at the Royal Exchange, London, composed of merchants, brokers, ship-owners, and underwriters. Its purpose is to promote commerce especially by marine insurance and the publication of shipping news.
- Lobelia.**—An exogenous plant of the natural order *Lobeliaceæ*, which contains almost 400 species. These plants flourish in damp woods in America and northern India. The plant is poisonous. One of the species goes by the common name of Indian tobacco. The commonest of the wild sorts is *Lobelia inflata*, so named from the inflated or swollen appearance of the seed-vessels.
- Lobster, The.**—See CRUSTACEAN, 2706.
- Local Government.**—The regulation and administration of the local affairs of a city or district by its inhabitants, as distinguished from such regulation and administration of authority by the state or nation at large. The state was an institution of the Roman empire, but the Teutonic nations developed a local government of their own and gave the name "town" to language and "township" to constitutional law. When the first settlements were made in America, England had well-developed forms of local government which served as a pattern for the Jamestown Colony in Va., and for other colonies as well. The colony was subdivided into counties, the counties in some cases into hundreds, and the hundreds into parishes or townships. In the southern colonies, where the plantation system prevailed and the people were scattered over a large area, the colonists on their separation from England retained the county system as being best suited to their population. In the New England colonies, where population was more compact, the township government was retained. Thus two distinct types of local government prevailed in the U. S.—the township system in New England and the county system in the South. In the middle colonies a system of local government was instituted which combined the county and township systems. This is now generally in use in the Western States.
- Local Option.**—The principle of law, established in some of the states of the Union, by which the question whether or not licenses to sell intoxicating liquors shall be granted, is submitted to a vote of the people of a town or other minor political community. If the people of any locality decide for prohibition, it becomes part of the state law for that community.

- Locke, John.**—(1632-1704.) A celebrated English philosopher, founder of the "sensational" school of philosophy. His principal work is his "Essay Concerning the Human Understanding."
- Lockhart, John Gibson.**—(1794-1854.) A Scottish author, best known by his biography of his father-in-law, Sir Walter Scott.
- Lock Haven.**—The capital of Clinton Co., Pa. It has a flourishing lumber trade; pop. (1900), 7,210.
- Lockport.**—The capital of Niagara Co., N. Y., on the Erie Canal. Pop. (1900), 16,581.
- Locofocos.**—The radical faction of the Democratic party in New York in 1835-37. The equal rights faction was opposed to the granting of bank charters and special privileges to favorites of the government, and the Tammany men supported the administration. At a meeting held in Tammany Hall, N. Y., Oct. 29, 1835, the regular Tammany Democrats tried to gain control, but finding themselves outnumbered, they turned out the lights and left the hall. The equal rights men produced candles and lighted them with "Locofoco" matches and continued the meeting. The phrase, at first used in derision of this faction, was later adopted by the Democratic party as an emblem of promptitude in an emergency. The name was also applied sometimes to the party in derision by their opponents.
- Locomotive.**—The largest locomotive ever constructed prior to 1880 was that made at the Baldwin Locomotive Works during the early part of 1879. It was turned out ready for use April 10 of that year and named Uncle Dick. Uncle Dick weighed 130,000 pounds, was sixty feet from headlight to the rear end of the tender. He is now at work on the Atchison, Topeka, and Santa Fé road. During the year 1883 the same works that constructed Uncle Dick turned out several locomotives for the Northern Pacific Railroad, each weighing 180,000 pounds. During the same year, as if to overshadow the Baldwin works, the Central Pacific Company caused to be built at their shops in Sacramento, Cal., what are really the largest locomotives in the world. They have 8 drive-wheels each, the cylinders are 19 inches in diameter, and the stroke three feet. These engines weigh, with the tender, as Uncle Dick's weight was given, almost 190,000 pounds. The Baldwin Works, in 1899, completed for the Northern Pacific an engine weighing, with tender, 225,000 pounds.
- Locust, The.**—2789, 2838.
- Lodge, Henry Cabot.**—Born at Boston; 1850. An American historian and politician.
- Logan, James.**—(1674-1751.) A colonial politician; accompanied William Penn to America in 1699 as secretary of the Society of Friends. He was chief-justice of the supreme court of Pa. (1731-39), and, as president of the council, was for two years acting governor of the colony.
- Logan, John Alexander.**—(1826-1886.) A noted volunteer soldier and politician. He served in the Mexican War and was a member of Congress 1859-61. At the beginning of the Civil War he entered the Union army as colonel of the 31st Ill. vols., but was soon made a brig.-gen. and later a maj.-gen. He served throughout the war in the Army of the Tennessee, under Grant and Sherman, leading a division, then a corps, and at the Battle of Atlanta he commanded the Army of the Tennessee after the fall of McPherson. He was a lion in battle and was the idol of his soldiers, by whom he was known as "Black Jack," from his dark skin and coal-black hair. After the war he served in Congress—four years in the House and 13 years in the Senate—until his death. He wrote "The Great Conspiracy," a political history of the war. He was largely instrumental in the organization of the Grand Army of the Republic.
- Log Cabin and Hard Cider Campaign.**—The presidential campaign of 1840, when William Henry Harrison was the candidate of the Whigs and the campaign cry was "Old Tippecanoe and Tyler, too!" It was a time of extraordinary political excitement. (See HARRISON, WILLIAM HENRY, 272.)
- Log-rolling.**—A name used to characterize political working and scheming for the success of a party or a candidate; it is analogous to "wire-pulling."
- Logwood.**—The dark-red solid heartwood of *Hæmatoxylon Campechianum*. It grows extensively in Mexico and Central America and was in the 18th century introduced into Jamaica. It has a slight odor, resembling that of violets, a sweetish taste, and is astringent.
- Lohengrin.**—(1) In German legend, a knight of the Holy Grail; the mythical knight of the swan. (2) The title of an opera by Wagner, first produced, in 1850.
- Loki.**—1634.
- Lollards, or Lollhards.**—A semi-monastic society whose members devote themselves to the care of the sick and dead. It developed from a society in Antwerp in 1300 who banded themselves together for the burial of the dead. The name was also given to the followers of John Wyclif in England. The Lollards anticipated the fundamental doctrines of Protestantism and Puritanism. For over a century they were subject to severe persecutions. (See WYCLIF, JOHN.)
- Lombardy.**—In Italy, a department including the provinces of Milan, Como, Bergamo, Pavia, Sondrio, Brescia, Cremona, and Mantua.
- Lombardy Poplar, The.**—See POPLAR, 2834.
- Lomond, Loch.**—In Scotland; the largest lake of Great Britain; famous for its magnificent scenery.
- London.**—Capital of England; the center of population and the financial and commercial center of the world. Its population (1901), was 4,536,063. It is divided up into twenty-seven boroughs. The houses of Parliament, and the abbey in which the sovereigns are crowned, are located in the borough of Westminster. What is known as the "City," or London proper, comprises an area of about a square mile and includes chiefly the banks, the law courts, and St. Paul's Cathedral.

London Bridge.—One is said to have existed in A.D. 978. The first pile of the present bridge was driven in 1824, built by John and George Rennie; opened by William IV. and his queen, Aug. 1, 1831.

Londonderry.—(1) In Ireland, a maritime county of Ulster; chief industry, the manufacture of linen. (2) The capital of the county of Londonderry; famous for the successful defense of the Irish Protestants against James II. 1689. Pop. (1901), 39,873.

London Wall.—Built by the Romans in 350-369 to inclose the city, which at that time covered 380 acres. It was broken at the time of the Danish invasion, but was restored by Alfred the Great. Parts of it may still be seen, especially in the street in the capital of England known as London Wall.

Lone Star State — Texas.—Texas is designated the Lone Star State from the device (a single star) on its coat of arms and state seal and banner. The lone star flag was made at Harrisburg, Pa., and presented in 1835 to the company of Capt. Andrew Robinson when the movement was initiated to free what now forms the state of Texas from Mexican control and secure it an independence, prior to incorporation in the Union.

Long, John Davis.—Born at Buckfield, Me., 1838. A statesman. He was a member of the Mass. House of Representatives (1875-78), and three times speaker of the House; was lieutenant-governor, 1879; governor (1880-82); member of Congress (1883-89); appointed Secretary of the Navy, 1897.

Long Branch.—A village in Monmouth Co., N. J., on the Atlantic coast; a fashionable seaside resort. Pop. (1900), 8,872.

Longevity, The Bearing of Occupations on.—4849.



GOD'S ACRE

Longfellow, Henry Wadsworth.—Sketch of, 384.

Long Island.—A large island forming part of the state of N. Y. It is separated from Conn. and from the mainland of N. Y. by Long Island Sound. Length, 118 miles; greatest width, 23 miles; area, 1,682 square miles.

Long island, Battle of.—A battle fought at the western extremity of Long Island, Aug. 27, 1776, in which the Americans were defeated by the British under Howe.

Long Island Sound.—An arm of the Atlantic Ocean which separates Conn. and the mainland of N. Y. from Long Island.

Longman, Thomas.—(1699-1755.) A noted London publisher; part owner of Chambers's Cyclopædia, and Johnson's Dictionary.

Longman, Thomas.—(1730-1797.) An English publisher, nephew and successor of Thomas Longman.

Long Nine.—A famous body of nine men who at one time represented Sangamon County, Ill., in the state legislature. Abraham Lincoln was one of the number, not one of whom was less than six feet in height. The delegation contained several men of marked ability, and became celebrated as the "Long Nine."

Long Parliament (England).—Met Nov. 3, 1640; was forcibly dissolved by Cromwell, April 20, 1660.

Long's Peak.—A peak in the Rocky Mountains, Col. Height, 14,270 feet.

Longstreet, James.—Sketch of, 389.

Lookout Mountain.—A ridge in northwestern Ga. and adjacent parts of Tenn. and Ala.

Lookout Mountain (Tenn.), Battle of.—Lookout Mountain is a lofty spur near Chattanooga, terminating at the Tennessee River in an abrupt precipitous point, known as "the Nose." During the investment of Chattanooga (Oct.-Nov., 1863) after the battle of Chickamauga, the Confederate army, under Bragg, occupied Missionary Ridge as its main position, with a strong force and heavy batteries on Lookout Mountain. The Union army was doubled in strength by the arrival of Gen. Sherman, with the Army of the Tennessee, and Gen. Hooker, with two corps from the Army of the Potomac. Gen. Grant was personally in command. Preparatory to the projected attack on Missionary Ridge, Hooker, Nov. 24, with a portion of his own troops and a detachment of the Army of the Tennessee, stormed Lookout Mountain and carried it in gallant style, driving the Confederates from the crest and capturing many prisoners and guns. During the action low-hanging clouds concealed the summit from view; hence the popular name often given to it—"The Battle above the Clouds." The following day the entire Confederate army was routed. (See MISSIONARY RIDGE, BATTLE OF.)

Loomis, Elias.—(1811-1889.) An American mathematician and physicist. The author of several standard mathematical works.

Loon, The.—2607.

Loosestrife, The Yellow.—2898.

Lorraine.—A part of the German empire. Dates back to 855. This tract was ceded to Germany at the peace of 1871. Area, 2,431 square miles; pop. (1895), 524,885.

Lory, The.—See PARROT, 2597.

Los Angeles.—In California, the capital of Los Angeles County; a winter resort and the center of the fruit growing district.

Lossing, Benson John.—(1813-1891.) An historian and journalist. Among his works are "Pictorial Field-Book of the Revolution," "History of the United States," and "History of the Civil War in the United States."

Lothair.—(795?-855.) Emperor of the Holy Roman Empire. Eldest son of Louis le Débonnaire and grandson of Charles the Great, or Charlemagne. In a war with his brothers Louis the German and Charles the Bald, he was defeated

in the battle of Fontenay in 841. By the treaty of Verdun he was left in possession of the imperial title and an equitable portion of the empire.

Loti, Pierre.— See VIAUD, LOUIS MARIE JULIEN.

Lottery.—The Continental Congress attempted to raise money by lotteries in 1777. As early as 1612, the Va. Company was authorized by its charter to hold lotteries for the benefit of its colonization schemes. In the 18th century, lotteries were very popular in America. Legislatures authorized them for building churches and schools, and for all sorts of public improvements. Faneuil Hall in Boston, having been destroyed by fire in 1761, was rebuilt with the proceeds of a lottery. The La. State Lottery was the last authorized institution of the kind in the U. S., and it was conducted on a very large scale until near the end of the 19th century. Popular opinion has undergone a change regarding lotteries. They are condemned as a form of gambling, and are forbidden by act of Congress to use the mails. This act resulted in putting an end to the great La. lottery.

Lotto, Lorenzo.— 3443.

Lotus, The.— See WATER-LILY, 2919.

Loubet, Emile.—A prominent French statesman, born in 1838. He has been in public life continuously since 1876, and since 1899 has been president of France.

LOUIS XIV.—(1638–1715.)

Louis XIV., who reigned over France for a period of seventy-two years, was born in 1638, the year which proved to be the crisis in the Thirty Years' War and the "turning point of the struggle between France and the House of Austria." In 1643, when his father Louis XIII. died, he became king, though he was not yet five years of age: but he was still under the control of his mother, who intrusted his education to Mazarin, whom she had chosen as her prime minister.

At an early age he learned the usages of the Court, read the history of Henry IV. and other great rulers. He also learned dancing, drawing, and riding, and became skilful at all athletic exercises. In 1647 he told his mother at a ball at Fontainebleau that he wished to take the government into his own hands, but he was encouraged to continue his studies and wait. Though Mazarin carefully and successfully instilled into him the necessity of cultivating habits of order, of regular work, of perseverance, of firmness, and of self-reliance, he had no great liking for his schoolmaster.

During his minority he saw France achieve brilliant successes in her foreign policy. By securing Alsace, she advanced her boundaries nearly to the Rhine. By the changes in the German constitution, she was relieved of any fear from Austria, whose emperor had been checked in his power. She was now regarded by the smaller German princes as their protector. She remained the leading power of Europe, and the guardian of the balance of power.

During the years 1648–54 Louis learned some of his first lessons in the art of government. There is probably no period in later French history which afforded more justification for absolutism. By early experiences he had been taught the necessity of crushing all opposition. The murmuring *Parlement* of the early years of his reign now became a mutinous *Parlement*; and the Fronde, by filling the country with the turmoil and misery of civil war, compromised the conquests and glory gained by the French armies during the years 1643–48. "The constellations were terribly against kings," and France was no exception to the rule.

Louis was opposed on all sides by a curious medley of princes, generals, ecclesiastics, and intriguers, but he had a power which was constantly increased, as a result of the opposition that sought to restrict it.

In 1653 he had his first real experience of warfare, appearing in camp by the advice of Mazarin who impressed upon him the importance of close application to business, and the necessity of ruling by himself with the advice of his generals and ministers. He was received with enthusiasm by the troops, saw some fighting, and was present at the councils of war.

In 1655, at a serious crisis, he showed himself capable of dealing with parliamentary opposition. In his every-day dress, he suddenly appeared before the astonished *Parlement* and upbraided the members for their conduct. "Each of you," he said, "knows how your assemblies stirred up troubles in my state. I have learnt that you intend to continue these meetings. . . . I am come here expressly to forbid the continuation of them." He astonished all by his determination.

After the death of Mazarin, in 1661, Louis XIV. chose to be his own prime minister and for more than half a century he ruled France as an absolute monarch. He gave eight hours each day to business. He consulted with his counselors, and obtained information from them, but he was not controlled by their votes. He was ably assisted by Colbert, the superintendent of the finances, whose policy was to make France free inside but protected against foreigners.

Colbert placed a protective tariff on foreign goods, encouraged emigration of artisans to France, and sent agents abroad to buy industrial secrets. Thus he gave a great stimulus to new industries, and gave all a chance to work. He encouraged thrift, and opposed a kind of charity which did not help people to help themselves. He made every effort possible to compete with Holland, who had become a great commercial power. He had a large view of many things. He also had an eye for details, and made rules for the width and color of cloth, as well as for the encouragement of manufactures and commerce, and the improvement of the government. He even provided that the trees should be trimmed in a certain style. Everything from tree-trimming, cloth dyeing, and

Louis XIV.—Continued

soap making to preaching and funeral orations had to march in step with the king.

Louis XIV. made his force felt at every step. In the provinces he made reforms which not only increased his own power over the nobles and magistrates, but reduced the burdens of the people. He kept officials and ministers that were able, but he acted on the theory that all must keep step to Louis XIV. He desired uniformity in everything.

In order to secure uniformity in religion, he gradually deprived the Protestants of the privileges which formerly had been given them. He was opposed to the Pope politically, and in 1682 virtually established the independence of the Catholic Church of France so far as the supremacy of the Pope was concerned, but he wanted to give evidence that he was a Catholic. Finally he finished his policy as to religion, by sending troops to "convert" the Protestants who still clung to their faith. He was successful in driving out Protestantism, but he failed to consider the evil results that would follow. Though he took measures to prevent emigration, he could not establish a blockade that would resist the heroism which his heterodox subjects displayed in flight. He drove from the country the very men who were needed to help to carry out Colbert's policy.

By the aid of Colbert and of Vauban—who built defenses and improved the army—Louis made himself supreme, both at home and abroad. He had no parliament to oppose his will. He had a standing army by which to silence every murmur of discontent. He considered himself absolute master of Church and State, with a divine right to rule his people as a father rules his family, and responsible to God alone for his conduct.

He became the central orb of the French political system, around which his noble courtiers revolved like planets around the sun. He built a great and costly palace at Versailles, about twelve miles from Paris. He surrounded it with beautiful parks, with trees, flowers, lakes, cascades, and fountains. He adorned its beautiful apartments with statuary, paintings, mirrors, and tapestry. He kept four thousand servants to wait on him and his court. On rising each morning, he was surrounded by nobles who stood in the order of their rank to witness the spectacle. From specially favored ones, he received assistance in preparing his toilet. From one, he received his slippers, from another his wash basin, and from others his robe, and cravat, etc. He lived in an atmosphere of praise and flattery. Whether he was great, he was thought to be so. He held every noble completely in his power.

Though lacking in originality, genius, and learning he was well fitted to play the part of a monarch. He was dignified, reserved, calm, and courteous. He was majestic in person, and had a carriage that was above criticism. He had unerring tact even in the smallest matters,

and an unusual sense of propriety and order. He had a gravity of manner and a habitual discretion which impressed favorably those with whom he came in contact. He disliked brilliancy of intellect, and distrusted men of great ability. Like Walpole, he liked to have around him men of only moderate talent.

"His strength lay in his firm belief in himself, in his conviction of the divine origin of royalty, in his determination to be in reality a king, in his energy and honest desire to do his duty." After he took the government into his hands, he worked five hours a day till his death—besides the hours he spent working alone. He refused an audience to no one who had urgent business.

Great at home, he resolved to extend his rule abroad. He aspired to rule Europe, and to establish a vast empire in America. In 1665, on the death of Philip IV. of Spain, he claimed the Spanish Netherlands, but in the peace of 1668 he only succeeded in gaining a few frontier towns in Flanders. In 1672, he occupied most of the country, and after six years of strong resistance from William of Orange he made a peace, by which he held several important places in the Netherlands.

In 1685, when France was already suffering from the effects of long-continued wars, and the expensive luxuries of court life, Louis unfortunately revoked the Edict of Nantes. He ordered the Huguenot churches to be destroyed, and the Huguenot ministers to leave the country within fifteen days. To escape the persecution that followed, many of the best citizens of France escaped to neighboring countries, where they helped to man the ships which finally destroyed the navy of Louis XIV.

In a war, begun in 1688, for the purpose of forcing England to restore James II. to the throne, he was unsuccessful and by the Treaty of Ryswick (1697) he gave up the cities he had previously taken in the Netherlands, and also his other conquests beyond the Rhine. In the War of the Spanish Succession (1701-13), by which he hoped to obtain control over Spain, he met defeat after defeat, and misfortune after misfortune, until he signed the treaty of Utrecht in 1713, by which he lost much of his American territory, and agreed to demolish many of his costly forts.

After all his glory, he had lost his army, his navy, his colonies, his treasure, and also his son and grandson. He ended his days in gloom, and without the love of his people. He had built the foundation of his powerful government upon sand, and not in the hearts of his people.

On September 1, 1715, he met death with firmness and courage. He seemed conscious of the great blunder he had made in the expulsion of the Huguenots and in other policies. On August 11, at the beginning of his serious illness, he said to Philip, his great-grandson: "Try to keep peace with your neighbors; I have been too fond of war; do not imitate me in that." To this boy of five years, he bequeathed

Louis XIV.—*Continued*

a kingdom overwhelmed with debt, and filled with misery and discontent. When the news of his death reached Paris, the people rejoiced that they were freed from his rule.

Louis had a pride which, as it developed into arrogance, led him into serious faults. Through it he was led to neglect the public good and to adopt a policy of mere personal passion and ambition. As he grew older, he became stupid, obstinate, and selfish; and believed himself to be above all other men, and above the law as a result of training, flattery, and adulation. He became more and more impatient of opposition, and for a time after the peace of Nimeguen (1678) he labored under the delusion that he was permitted by God to undertake the most reckless schemes.

Louisburg.—On the coast of Cape Breton, Nova Scotia. Built by the French, 1713; taken by the colonists, 1745; restored in 1748; taken by British, 1758. Pop. (1901), 1,588.

Louisiana.—One of the Southern States of the U. S. of America. Bounded on the north by Ark. and Miss., east by Miss. and the Gulf of Mex., south by the Gulf of Mex., and west by Tex. It was partially explored by De Soto, Marquette, and La Salle, from 1541 to 1682, and was settled by the French about 1700; was ceded by France to Spain in 1763 and retroceded to France in 1800; was a part of the Louisiana Purchase of 1803, and in 1804 was formed into the Territory of Orleans; that portion lying east of the Mississippi River was added in 1810 and the state was admitted to the Union in 1812. It was one of the eleven states which seceded from the Union in 1861; was the scene of much fighting during the Civil War. The most important event was the passing of Forts Jackson and St. Philip, on the Mississippi River, and the immediate capture of New Orleans, by the fleet of Commodore Farragut. The state was readmitted into the Union in June, 1868. The surface is generally level and much of it is low, with many swamps, bayous, rivers, and lakes. Agriculture is the principal occupation, and sugar, rice, and cotton are the staple products. Baton Rouge is the capital, and New Orleans its chief city; Shreveport is the only other town of importance. Area, 48,720 sq. miles; pop. (1900), 1,381,625; nicknamed the Pelican State and the Sugar State.

Louisiana, District of.—That part of the Louisiana Purchase which is not included in the present state of La. It was established as a district with its capital at St. Louis in 1804. In 1805 it was given a separate government, as the territory of La. In 1812 the name of the territory was changed to Missouri.

Louisiana Purchase.—A name applied to the territory west of the Mississippi River, that was purchased from France in 1803. It embraced all of the present state of La. lying west of the Missis-

issippi River, together with New Orleans and the adjacent district east, comprising Miss. and Ala. below the thirty-first parallel; Ark., Mo., Iowa, a portion of Id. and Minn., all of the Dakotas, most of Kan., all of Neb. and Ind. Ter., part of Col., most of Wyo. and the whole of Mont. It is claimed by some that Ore. and Wash. were included, but at that early day it was not possible in the wilderness for the boundaries to be clearly defined.

Louisville.—The largest city of Ky.; an important trade and manufacturing center. Pop. (1900), 204,731.

Lourdes.—In France, a town in the department of Hautes-Pyrénées; a noted place of pilgrimage.

Louvre.—A palace in Paris now used chiefly as a museum of fine arts. It contains one of the most notable collections of painting and statuary to be found in the world. From the time of the 13th century or earlier it was a castle and was used as a palace by the kings of France until the time of Louis XIV., who built Versailles for the purpose about the beginning of the 18th century. The building itself is of great beauty, having been enlarged and elaborately decorated by successive sovereigns, particularly Louis XIV., Catharine de Medicis, Napoleon I., and Napoleon III.

Love, The Omnipotence of.—4745.

Lovelace, Richard.—(1618-1658.) An English cavalier and poet. In the troublous times he was frequently incarcerated, and some of his most charming love songs were written in prison.

Lover, Samuel.—(1797-1868.) A noted Irish novelist and song writer.

Low, Seth.—Born at Brooklyn, N. Y., 1850. An educator of note. He was elected mayor of Brooklyn in 1881, and again in 1883; became president of Columbia College, New York, in 1890. Elected mayor of New York, 1901.

Low, Will H.—Born at Albany, N. Y., 1853. American painter, illustrator, and designer.

Lowell.—One of the capitals of Middlesex Co., Mass., at the falls of the Merrimac River. It is a center of cotton and woolen manufacture. Pop. (1900), 94,969.



LOWELL'S HOME

Lowell, James Russell.—(1819-1891.) An eminent American author and diplomat. His home was

- in Cambridge, Mass., throughout his life. He succeeded Longfellow in 1855 as professor of belles-lettres in Harvard College. Was editor of the "Atlantic Monthly" and "North American Review." He achieved his first fame in poetry, but added to it by his essays and public addresses. He was United States minister to Spain 1877-80, and to England 1880-85. He was highly honored by the English people, who have erected a tablet to his memory in Westminster Abbey.
- Lowestoft.**—In Suffolk, England, a seaport and seaside resort.
- Lowlands, or Netherlands.**—The name often given to Holland, a kingdom on the northwestern coast of Europe. The name refers to the low altitude of the land, which in many places is below the sea-level. Its capitals are The Hague and Amsterdam. Its struggles for independence against the encroachments of Spain in the 16th century are among the most romantic episodes in the history of human liberty.
- Loyalists.**—Those of the American colonists who opposed the Revolutionary War, and in some instances took up arms against their countrymen in the struggle for independence. They were also called Tories. During the progress of the war they were treated with much harshness. Their property was confiscated or destroyed; they suffered social ostracism, and some were tarred and feathered; legislative assemblies banished them from some of the colonies. When the British troops withdrew, at the close of the war, the Tories found life in the states unendurable, and thousands removed to Canada, Nova Scotia, New Brunswick, the Bahamas, and other parts of the West Indies.
- Loyola, Ignatius de** (INIGO LOPEZ DE RECALDE).—(1491-1556.) Founder of a religious order known as the Society of Jesus.
- Lubbock, Sir John.**—Born at London, Apr. 30, 1834. An eminent English scientist, author, statesman and banker. Now Baron Avebury.
- Lübeck.**—One of the ancient free cities of Germany, situated on the River Trave. Lübeck was founded in the 11th century, and was declared a free city in the 12th century. Pop. (1895), 69,874.
- Lucca.**—(1) In Italy, a province of Tuscany. (2) The capital of the province of Lucca; noted for its olive oil, its silk, and woolen manufactures.
- Lucca, Pauline.**—Born, 1841. A famous German soprano.
- Lucerne.**—The capital of the canton of Lucerne, in Switzerland; a favorite resort for tourists.
- Lucerne, Lake of.**—In Switzerland, a lake noted for its magnificent scenery; identified with the legend of William Tell. Length, 23 miles.
- "Lucerne, Lion of."**—A famous piece of sculpture by Thorwaldsen; 3596.
- Lucian.**—(120 (?)–200 (?).) A celebrated Greek satirist; author of critical, biographical, and romantic works.
- Lucifer.**—The morning star; the name given to the planet Venus when it appears before sunrise.
- Lucknow, India.**—Once the capital of Oudh, and in 1857 famous as the scene of the relief, by Sir Henry Havelock, of its beleaguered English defenders during the Sepoy rebellion. The town is situated on the Goomti, a tributary of the Ganges, in what is now the Northwest Provinces of India.
- Lucretius** (TITUS LUCRETIVS CARUS).—(96-55 B.C.) A celebrated poet of Rome.
- Lucullus.**—A Roman general (110-57 B.C.). Served under Sulla in the East, and after serving many years in a military capacity became famous for his wealth. He was also a collector of large means and a patron of learning.
- Luini, Bernardino.**—3435.
- Lully, or Lulli, Giovanni Battista.**—(1633-1687.) A distinguished French composer.
- Lumberman, Hints on the Vocation of the.**—5290.
- Lump-fish, The.**—2677.
- Lundy's Lane** (Canada), **Battle of.**—After the defeat of the British force under Gen. Riall, at Chippewa, in 1814, it returned by way of Queenston toward the head of Lake Ontario. Riall was soon reinforced and returned to attack the Americans under Gen. Brown, who had pursued him as far as Queenston. Learning of the British reinforcement, Brown retreated to the Chippewa River, and on July 24, 1814, encamped on the south bank, where he had defeated Riall a few days before. On the 25th, Gen. Winfield Scott, with about 1,200 men, went forward to reconnoiter, and came upon the British army, 4,500 strong, near Niagara Falls, at Lundy's Lane, a road leading from the Falls, to the end of Lake Ontario. Soon the entire American force was engaged, the battle lasting from sunset till midnight. The American force numbered about 2,500 men. Both sides claimed the victory, though both left the field. The American loss was a total of 852 out of an army of 2,500. The British lost 878 out of an army of 4,500.
- Lüneburg.**—(1) In Prussia, a government district in the province of Hanover. (2) The capital of Lüneburg; salt and cement manufactures. Here the first battle of the War of Liberation was fought, in 1813.
- Lupercal.**—A grotto on the Palatine Hill of ancient Rome, supposed to be the den of the she-wolf that suckled Romulus and Remus.
- Luray Cave.**—A remarkable prehistoric cave in Virginia, discovered in 1878. It abounds in singular objects deposited from the dripping waters; one, the Empress column, is a pure white mass of alabaster 40 feet high, reaching from the floor to the roof. Another pendant, nearly equal to the Empress in height, vibrates for a minute after being struck; one of the rooms called the Cathedral has a series of 20 slender columns which sound part of the musical scale on being struck successively. Whether Norsemen or Red men were its early inhabitants is not positively known, but many skeletons and implements of antiquity have been brought to light.
- "Lusiad," The.**—(*loo'si-ad.*) The national epic poem of Portugal, by Camoens, published in 1572.

LUTHER, MARTIN.—(1483-1546.)

Martin Luther, the hero of the Reformation, was born at Eisleben, Saxony, in 1483, at a time when Columbus was struggling to get means for making the voyage which resulted in the discovery of a New World. He was the son of a miner of humble tastes and scanty purse. He belonged to the peasant class and to the day of his death took pride in his lowly ancestry and modest home. His parents worked hard to support their children. His mother carried on her back the wood necessary for the comfort of the humble home.

He did not spend his childhood in pleasure. He raised himself out of the dust by struggle and patient endurance. He was treated with the greatest severity by his parents, who were firm believers in the merits of the whip in correcting childish faults. In later life he said: "My parents' severity made me timid; their sternness and enforcement of a strict life led me afterward to enter a monastery and become a monk. They meant well, but they did not understand the art of adjusting their punishments." He found that his teachers in the school at Mansfield used the same brand of corrective medicine, behaving to their pupils like "gaolers to thieves." He was soundly thrashed fifteen times in one afternoon. He afterward spoke of the "purgatory of schools where we . . . learn nothing from all this flogging but terror, fear, and misery." He probably received more flogging than most boys, but afterward did more work than those who received fewer stripes.

He received a religious training that was strictly orthodox. In 1497, he went to Magdeburg, where the Roman church had a powerful effect upon him. A year later, he was sent to Eisenach, where he could live with relatives and attend school at less expense. Following the custom of the poorer scholars in Thuringia, he went about the streets singing at the doors of the principal citizens for means of support. He often met with a rough repulse, but he finally charmed a wealthy lady, Ursula Cotta, who took him to her own home, where he had generous treatment and the advantages of an excellent teacher. Here he became acquainted with happy family life and parental love.

In 1501, he entered the University of Erfurt, a great center of classical learning. He was captivated and worked with ceaseless energy. He mastered science after science, with a quickness that amazed his professors. In studying the Bible, he contrasted the simple gospel with the practices of the Church of his time. Though his father had intended that he should be a lawyer, the impulses of his soul led him more and more toward theology. The rough and austere training of his youth had driven him within himself. His later studies had led him in a mystical direction. For the first time in his life he refused to obey his father. His mind was on the religious life, and not on law. In 1505, having taken his master's degree, he separated from

his father, bade farewell to the world, and entered an Augustinian cloister as a monk. Here, he subjected himself to severe discipline. He denied himself all comforts, and passed whole nights in prayer and fasting. He even inflicted upon himself the tortures by which people in the Middle Ages sought to prepare themselves for admission to heaven. In his gloomy rigidity, he devoted himself entirely to study, and lost sympathy for the healthy life of the flesh. His mind was agitated by the question of redemption from sin. He could not believe that absolution from the burden of sins could be purchased by the observance of formal acts and duties. He felt repulsed by the Old Testament God of revenge and wrath. He finally reached a conclusion based upon Paul's doctrine of justification by faith. He was soon to speak to the living world with the force that arose from the depth of his convictions.

In 1508 he was called to the University of Wittenberg (as a professor), where he gradually overcame his shyness, shook off his monastic reserve, and attracted much attention by his impressive preaching. He spoke from the depths of his fiery soul, and in magnetic words that were not gathered from musty manuscripts or books. In 1510 he visited Rome—thus fulfilling one of his boyish longings. He was still a firm believer in the Roman Church. At the first sight of the Eternal City, he threw himself upon the earth, and, with hands uplifted, exclaimed: "I greet thee, Holy Rome, thrice holy from the blood of the martyrs which has been shed in thee. He was a keen observer and soon saw much that did not strengthen his veneration for the city and the papacy. He was not favorably impressed with the superstition, cunning, pride, and vice, which he found.

As he left Rome, he was more and more impressed with the words: "The just shall live by faith." Though he was still a devoted monk, he felt the power of a new life. For seven years he continued to fascinate his hearers by his attractive lectures, and by the boldness and novelty of his views. He grew in the confidence of his students, and in fame abroad.

He took the position that the forgiveness of sins through Christ is a free gift. As a result of his position, he was led into conflict with church officials. Through facts disclosed to him in the confessional, he learned of the evil effects resulting from the sale of indulgences, or tickets of pardon, which were supposed to extinguish the penalties for sins, and release souls from the flames of purgatory. Church officials, in order to collect money, abused the practice of the ancient Church. Between 1500 and 1517, five extraordinary indulgences were proclaimed with the alleged purpose of securing money for defense against the Turk. They were successful in causing much German coin to "fly over the Alps" to Rome. In the instructions of Tetzel, the agent for the sale of the pardons in Germany in 1517, there was a regular tariff of taxes, a certain number of ducats being

Luther, Martin.—*Continued*

specified for each particular sin. The murder of parents or brothers and sisters was rated at four ducats. Some who peddled the pardons put up notices which remind one of the patent-medicine advertisements which are so plentiful at the beginning of the twentieth century. Such abuse of the sacred mysteries of the Church was a source of much disgust.

Luther had a nature which led him to oppose the indulgences with all his masterly activity. He felt that the abuse was so iniquitous that he could not remain silent. When he heard that Tetzels was near Wittenberg, he was seized with indignation and resolved to bring the pardon question to an issue. With no ambition to gratify, he began his mission. He began it as an obedient son of the Church. In the pulpit, he publicly thundered against the abuse of indulgences. Then he posted on the church door his ninety-five theses, in which he protested against the sale of forgiveness, and gave his views on true repentance and the limit of the power of the pope. By that act, he created a storm of which he never lived to see the end. When the pope ordered him to recant, he replied: "I cannot recall." When he was ordered to Rome he only wrote a respectful letter in reply. In the attempts that were made to settle the matter by diplomacy, he was driven to take one step after another until he finally overstepped the boundaries of the Church and drew his nation with him. Amid the threats of his enemies, he was calm, joyous, friendly, attractive, and full of vitality—though he had become as thin as a skeleton, by long study and much care.

When he finally informed the German nobles that it was time to throw off Rome and start out on an independent religious and national life, he was excommunicated by the pope. On December 20, 1620, in the presence of a multitude who gathered by his invitation, he burned the papal bull. Thus he resisted every weapon of the pope and treated the last one with derision.

Though the emperor, Charles V., had political reasons of his own for favoring the pope, Luther (and his cause) had attracted a religious and national sympathy which protected him from the danger of condemnation without a hearing. He was summoned to appear at Worms and testify for himself. Though he doubted whether the Emperor's promised safe-conduct would protect him, he bravely resolved to face death rather than to flee. He made the long, difficult journey in a farmer's waggon. When he was reminded of the fate of John Huss and advised to turn back, he said: "Huss has been burned, but not the truth with him. I will go in though as many devils were aiming at me as there are tiles on the roof." Though he was embarrassed by the pomp of the court, he kept a bearing that was firm and unyielding, stating that no threat could induce him to recant. By a decree which was proclaimed after part of the assembly had

gone home, and never enforced, Luther was placed under the ban of the empire and his works were to be burned. Though all people were forbidden to give him shelter, food, or aid, he was befriended by Frederick the Wise and taken to Wartburg Castle, where for eight months he used his pen vigorously, translating into the German language the New Testament and parts of the Old.

Luther was now compelled to shield his work from the errors of his friends who desired to tear down every picture and ornament that served as a reminder of Romanism. From his watchtower, he saw the dangers that might result from the excesses of the Anabaptists. Leaving Wartburg in March, 1522, without a guard, he soon appeared at Wittenberg, and by his wisdom and tact, put a temporary check to the agitation. When the peasants broke out into a general revolt against the nobles and priests, in 1524, and pleaded the Bible as their justification in demanding liberty of conscience and freedom from oppression, Luther, after careful study, took the side of law and order, but he spoke to the princes against oppression and advised them to be moderate in dealing with those who had revolted.

In 1525 Luther married Catharine von Bora, a nun, and established a home. He once said that he took this step "to please his father, to tease the Pope, and to vex the devil."

His home became the center of his literary labors and rallying place of his friends. In spite of an impaired constitution, resulting from his early ascetic life, he was happy, and did an amazing amount of labor. He found that it was necessary to instruct the people and continue the work that he had begun. He preached robust sermons in the plain language of the people, and had them published and circulated. He translated the Bible in such plain language that it could be read by all. He issued about two hundred and twenty separate writings. He gave to his people hymns and a manual of popular instruction, as well as a Bible in their own language. He stamped the seal of his own soul upon the German language and upon the German mind.

Luther died in 1546, at Eisleben where he had gone to preach. Within a few rods of the house in which he was born, he breathed his last. "He is gone," said Melancthon to his students, "the chariot of Israel and the horsemen thereof, who ruled the church in these troubled times."

Luther did not create the Reformation. The spirit of reform was in the air. It had been gathering strength for a century or more. New conditions and new ideas had resulted from the use of the printing-press, the discovery of America and new trade routes to India, the revival of learning and an increase of intercourse and interest between peoples. Reformation was sure to come, but needed a strong leader.

Luther, Martin.—*Continued*

Luther was well suited for a popular leader in such a movement. He knew how to reach men's souls with the direct and warm words of common life. He could tell in simple language the thoughts and work of scholars and thinkers. He had depth of feeling, firmness of conviction, and a strong personality which gave him great power in convincing others. His own experience had been a growth—and a result of constant work. He had reached conclusions which he could defend with spirit. He asserted for himself the right of free thought. Though his first purpose was to defend the church against abuses, he finally found it necessary to break from the church. Once having broken, he did not think of turning back.

With his rude strength, bold energy, and terrible earnestness, Luther was a striking character. With an ardent impulsive nature, he did not mince his words. Though he was always sighing for peace, he was well fitted for the heat of the battlefield. He described himself "as rough, boisterous, stormy, and altogether warlike, born to fight innumerable devils and monsters, to remove stumps and stones, to cut down thistles and thorns, and to clear the wild woods."

With the sticks which Reuchlin and Erasmus and previous reformers, had helped to gather, he kindled a fire which neither pope nor emperor could extinguish nor smother.

Lutherans.—The ecclesiastical followers of Martin Luther, the German reformer. Luther gave to the organization simply the name Evangelical, but his own name has since been incorporated, and the word Evangelical has also been added. They are the state church of Germany, Denmark, Norway, and Sweden, and there are many adherents in the United States. With many differences of doctrine, all branches agree in receiving the Augsburg Confession, and the Apostles, the Nicene, and the Athanasian creeds. They are the chief Protestant denomination of Europe.

Luxembourg, Palace of the.—A palace in Paris completed 1620 for Maria de Medici, but now noted chiefly as a museum of art.

Luxemburg.—(1) A province of Belgium; capital Arlon. (2) A grand duchy of Europe, bounded by France, Belgium, Lorraine, and the Rhine Province of Prussia. Capital, Luxemburg.

Luxor.—A village of Upper Egypt, situated partly upon the site of the ancient Thebes, and celebrated for its antiquities.

Lycæus.—A surname for Jupiter or Zeus in Greek mythology.

Lycia.—An ancient geographical division of Asia Minor, bordering on the Mediterranean Sea. It was conquered by Persia in the 6th century B. C., since which time it has not been independent.

Lycurgus.—(About 800 B. C.) Lycurgus, according to oral tradition, gave the Spartans the laws under which they lived at the dawn of their written

history. Many things in his life are uncertain. It is believed that he was born in the 9th century B.C. and that he was a son of one of the Spartan kings. After the violent death of his father, he showed prudence as a ruler. He could not please the Spartan nobles, however, and was compelled to leave his home. He visited Crete, Egypt, and Chios, talked with the wise men, and studied their laws and customs. The Spartans of a later age said he went as far as India, the cradle of mankind. From Asia Minor he carried the Homeric poems to Greece. On his return, he found Sparta full of disorder, and the people desiring reform. He saw that it was a favorable time to give form to the customs and to complete a code of laws. In his plans he secured the support of the strongest party and the Delphian oracle.

Inequality among the people was the principal source of discord. The equal division of the lands, which had been made when the Dorians conquered the country, had been soon disturbed; and some were now very wealthy, while others were in poverty. Lycurgus, hoping to cure all evils, divided the land into many equal portions, and gave an equal value to every Spartan. The people were divided into three classes. The Spartans were the ruling class, and were called equals. The Provincials were free, but had no political rights. The Helots were slaves, both to their masters and to the state, and were placed under very strict rules. The state was founded on slavery.

The Spartans, themselves, in order to keep their title and rank, were required to submit to severe laws of discipline. They enjoyed equal rights, and were united into brotherhoods. They had a government, consisting of an assembly, a senate, and two kings. The senate shared in the power of the kings, and was a kind of "buffer" between the kings and the popular assembly.

Under the system of Lycurgus, the citizen was born for the state, and lived for it. All of his time and strength belonged to it. The young Spartan at the moment of his birth fell into the hands of the state, which could cause his death if it saw fit. He was allowed to kick, but was taught not to cry. At the age of seven he was taken under the care of teachers who gave him a training that would harden him to pain and give him the power of endurance. He made his own hard bed. He received no blankets from the government. He wore a petticoat until the age of twelve, then a horse blanket. He was flogged frequently. His meals were simple and scant, and were eaten at the mess table. At the common meal, talk was free; but it was expected that anything said there should not be repeated outside. At other times his speech was usually brief and to the point.

The Spartans hated long speeches, and even when joking they used no unnecessary words. They seldom spoke of money, business, or trade, but in praise of the good or contempt of

the worthless. They practised what they talked, and improved every part of life. They so filled the city with living examples that it was next to impossible for the youth not to be drawn toward honor and courage. Bravery was rewarded, and the coward was shunned by all. The strictness of such laws and training made heroes whose war-cry was "Victory or death."

Lycurgus had some trouble in getting all of the people to abide by his laws. The rich opposed his simple, public meals, and tried to stone him. They pursued him into a temple, and put out one of his eyes. But he got the kings, senators, and citizens to take an oath to change nothing during his absence, then he went away and allowed himself to die of hunger.

Lycurgus gave the Spartans a training which made them sober, and strong, and gave them the power to endure trials and hardships. He led them to respect those whose hair had become white. He taught them how to obey and how to die. In many of his laws he showed much wisdom; but he prepared the people for times of war, rather than for periods of peace. Sparta lived long under his strict and severe system; but Time came at last with his scythe, and changed all the plans of the early law-giver.

The attempt to secure equality of possessions did not agree with natural and social conditions. By legacies and donations, many lands again passed in the hands of a few men. The condition of citizens could not be kept the same. The state became poor. The women showed a need of better training. The Helots caused their masters much alarm. War and victory led to decline, and Sparta finally perished for lack of men.

Lydia.—A country in the western portion of Asia Minor bordering on the Ægean Sea. The ancient Lydians are supposed to have invented coin. In the 7th century B. C. it became a powerful empire, bringing into subjection some of the more prosperous of the Greek cities, and forming an alliance with others. In the year 546 B.C. Cyrus conquered the country, capturing Croesus the king. It was afterward brought under the rule of Alexander the Great and other conquerors in succession. It is now a Turkish province.

Lying as a Childish Fault.—877, 916.

Lyly, John.—(About 1554–1606.) A famous English, dramatist, novelist, and member of parliament. His chief literary work was "Euphues, or the Anatomy of Wit."

Lynch, Charles.—(1736–1796.) A Virginia planter. See LYNCH LAW.

Lynch, Thomas.—(1749–1779.) A politician, and one of the signers of the Declaration of Independence.

Lynchburg.—A city in Campbell Co., Va., on the James River. The chief industry is tobacco manufacture. Pop. (1900), 18,891.

Lynch Law.—Lynching is the punishment of alleged offenders, generally without trial, by unauthorized persons and without due process of law. The term "lynch law" is an ironical allusion to the absence of all law in such proceedings. The name is said to have been taken from Charles Lynch, a Va. planter and Quaker, who, with his associates, seized British sympathizers during the Revolution and hanged them by the thumbs till they shouted "Liberty forever."

Lynn.—A city in Essex Co., Mass.; noted for its extensive manufacture of leather and of shoes. Pop. (1900), 68,513.

Lynx, The Canada.—2460.

Lyon, Nathaniel.—(1818–1861.) A U. S. soldier. He served in the Mexican War as a volunteer, and at the outbreak of the Civil War was made a brig.-gen.

Lyons.—The second city of France; situated partly on a low-lying peninsula between the rivers Saône and Rhone and partly on the hill surrounding them. Lyons is the greatest manufacturing center in France. The city was founded 500 B.C. by the Greeks. Pop. (1891), 416,029.

Lyons, Edmund (Lord Lyons).—(1790–1858.) Diplomatist and admiral in the British navy. Became commander-in-chief of the navy during the Crimean War.

Lyra.—A constellation representing the lyre of Orpheus. Its most brilliant star is the third brightest in the northern hemisphere.

Lyre Bird, The.—2592.

Lysias.—A Syrian nobleman who was for a period regent of the kingdom. He fought with Judas Maccabæus and besieged Jerusalem. Was murdered by the populace of Antioch 163 B.C.

Lysimachus.—(About 361–281 B. C.) A Macedonian, a renowned general of Alexander the Great. After the death of the latter he became a king. His widening kingdom ultimately included a large part of Asia Minor and Macedonia.

Lysippus.—Greek sculptor, 3556.

Lytle, William H.—A U. S. Volunteer officer in the Civil War. He commanded a brigade in the Army of the Cumberland, under Gen. Rosecrans, and was killed at Chickamauga, Sept. 20, 1863. Author of the well-known poem, "Antony and Cleopatra," beginning: "I am dying, Egypt, dying."

Lytton, Edward George Earle Lytton Bulwer, first Baron Lytton.—(1805–1873.) Distinguished English novelist and statesman.

Lytton, Edward Robert Lytton Bulwer, first Earl of Lytton. (*Pseudonym* OWEN MEREDITH).—(1831–1891.) An author of great merit and a diplomatist who filled many important positions under the British crown. He was appointed Governor-General of India in 1876.

M

- Maartens, Maarten.**—The pen-name of J. M. H. van der Poorten-Schwarz, a novelist.
- MacArthur, Arthur.**—Major-general U. S. Volunteers and lieut.-col. U. S. army, successor of General Elwell S. Otis as military governor of the Philippines, is a native of Massachusetts. He served in the Civil war with the 24th Wisconsin infantry, and in March, 1865, was given the rank of lieut.-col. for gallantry in engagements in Kentucky and Tennessee, and in the Atlanta campaign. For meritorious services at Missionary Ridge he was also awarded a congressional medal of honor. In May, 1898, he was commissioned brigadier-general of U. S. Volunteers and in the following August was promoted to be major-general and given command of 2d division of the 8th corps on special duty at Havana, Cuba. Early in 1899 he was transferred to the Philippines, and as major-general acted there as military governor, doing good and arduous work in suppressing the insurrectionary Filipinos and greatly restricting the area of their guerilla operations.
- Macaulay, Thomas Babington.**—(1800-1859.) A noted English historian, poet, essayist, and statesman, who is best known by his "History of England."
- Macaw.**—2596.
- Macbeth.**—A Scottish king who usurped the crown by murdering Duncan 1040. He, in turn, was killed at Lumphanan in 1057.
- Macdonald, George, L.L.D.**—Casa Coraggio, Bordighera, Italy, age 77; poet and novelist, who conveys in all his writings the mysticism and inspiration of the Highlands; formerly an independent minister, but for half a century devoted to literature; "Robert Falconer" is perhaps his most popular novel.
- Macdonald, Sir John Alexander.**—(1815-1891.) A noted Canadian statesman and leader of the Conservative party. He was one of the signers of the Washington treaty. His great work was the federation of the Dominion of Canada.
- Macedonia.**—A district of northern Greece, the home of Philip and of Alexander the Great. Philip built up the Macedonian empire and compelled the Greek states to recognize it.
- MacGahan, Januarius Aloysius.**—Born in Ohio, 1844; died at Constantinople, 1878. A journalist and war correspondent. He was correspondent of the "N. Y. Herald" during the Franco-Prussian War (1870-71); went on the Prussian expedition against Khiva in 1873; accompanied the Arctic expedition on the "Pandora" in 1875, described in "Under the Northern Lights." In 1876 he began a series of letters to the London "Daily News" on the Bulgarian atrocities.
- Macgregor, or Campbell, Robert.**—See ROB ROY.
- Machiavelli, Niccolo.**—(1469-1527.) An Italian statesman and author. He was noted for astuteness in diplomatic missions.
- Machinery Emancipated Man from Drudgery, Has.**—5181.
- Mackenzie, Alexander.**—(1822-1892.) A Canadian politician. Born in Scotland, removed in 1842 to Canada, premier of Canada 1873-78.
- Mackerel, The.**—2669.
- Mackinac.**—A strait which connects Lakes Michigan and Huron, and separates the northern and southern peninsula of Mich. Near it are the island and town of Mackinaw and Fort Mackinac.
- Macleod, Norman.**—(1812-1872.) An eminent divine of the Church of Scotland, noted for his oratory and his writings.
- Maclise, Daniel.**—An eminent British historical painter of Scotch extraction: born in Cork 1806; died in London 1870. He was appointed R. A. in 1840.
- Maclure, William.**—Born at Ayr, Scotland, 1763; died at San Angel, Mexico, 1840. A noted geologist. Memoirs of his geological survey of the U. S. were published in 1809 and 1817.
- MacMahon, Comte Marie Edme Patrice Maurice de.**—(1808-1893.) A president of the French republic and a marshal of France.
- MacMaster, John Bach.**—Born at Brooklyn, N. Y., 1852. A historian. He became professor of history in the University of Pa. in 1883. He has published "History of the U. S."
- MacMonnies, Frederick William.**—Born at Brooklyn, N. Y., 1863. A noted sculptor (see 3605).
- Macon, Howard.**—Born at Philadelphia, 1799; died there, 1879. A Baptist clergyman and writer. Among his writings are "A Dictionary of the Bible," and "Travels in Southeastern Asia."
- Macomb, Alexander.**—Born at Detroit, Mich., 1782; died at Washington, D. C., 1841. A maj.-gen. He defeated the British under Prevost at Plattsburg, 1814, and was commander-in-chief of the army (1828-41).
- Macon.**—The capital of Bibb Co., Ga., on the Ocmulgee River. A railway, commercial, and manufacturing center, has a large cotton trade. Pop. (1900), 23,272.
- Macon, Nathaniel.**—Born in Warren Co., N. C., 1757; died there, 1837. A politician. He was a member of Congress from N. C. (1791-1815); speaker of the House (1801-06), and U. S. senator (1816-28). He was chosen president *pro tempore* of the Senate in 1825.
- Macready, William Charles.**—(1793-1873.) Eminent English Shakespearean actor. He visited the United States in 1826; in 1843-44; and again in 1849.
- MacVeagh, Wayne.**—Born at Phoenixville, Pa., 1833. A lawyer and politician. He was admitted to the bar in 1856; was U. S. minister to Turkey (1870-71); was U. S. attorney-general under President Garfield in 1881; was ambassador to Italy (1893-97).
- Madagascar.**—A large island situated to the southeast of the African coast, separated from the mainland by the Mozambique Channel. Its chief city is Antananarivo. Since 1856, Mada-

gascar has been a French colouy. Area, 228,600 square miles.

Mad Anthony.—A popular name for Gen. Anthony Wayne, a celebrated American soldier during and after the Revolution. The epithet was applied to him for his reckless daring.

Madeira Islands.—Situated about 400 miles northwest of the African coast. Grape growing and wine making are the principal industries. Area, 318 square miles. Pop., about 135,000.

Madison.—(1) The capital of Jefferson Co., Ind., on the Ohio River. Pork-packing is a leading industry; pop. (1900), 7,835. (2) A borough in the township of Chatham, Morris Co., N. J.; the seat of Drew Theological Seminary (Methodist); pop. (1900), 3,754. (3) The capital of Wis., and of Dane Co., between Lakes Mendota and Monona. It has important manufactures; is the seat of the University of Wis.; pop. (1900), 19,164.

Madison, James.—Born in Rockingham Co., Va., 1749; died, 1812. A bishop of the Protestant Episcopal church; president of William and Mary College (1777-1812).

Madison, James.—Fourth President; sketch of, 394.

Madison Square.—A public park in New York City, six acres in extent; bounded by 23d and 26th Sts., and by Fifth and Madison Aves.

Madison Square Garden.—A place of amusement in N. Y. City, remarkable for its great size and for the beauty of its architecture. It contains an amphitheater 300 ft. long and 200 ft. wide, a theater, a concert hall, a dining-hall, and roof-garden. The architecture in the style of the Spanish Renaissance is rendered in yellow brick and terra-cotta. The great square tower which rises from the south side is a reproduction of the famous Giralda at Seville, with the ornament greatly simplified. Its height is 332 ft., to the top of the crowning statue.

Madras.—One of the principal local governments of British India occupying the southern part of the Indian peninsula. It has 21 districts immediately under its supervision; has a population of 30,868,504, and an area of 139,900 square miles. Madras City is its capital. It possesses an important maritime trade and has a population of 452,518.

Madrado, Raymundo de.—3450.

Madrid.—The capital of Spain and of the province of Madrid; it has various manufacturing interests. Pop., 470,283.

Mæcenas, Caius Cilnius.—A Roman statesman and noble. He was a patron of literature, and especially befriended Horace. He died 8 B.C.

Maelstrom.—A whirlpool in the Arctic Ocean off the northern coast of Norway.

Maeterlinck, Maurice or **Mooris.**—Born, 1864. A famous Belgian poet.

Mafia.—A Sicilian secret order which aims to substitute its own authority for that legally constituted by the state. It first became prominent in 1860. In 1874-75 the Italian government made some fruitless efforts to suppress it. It is supposed to be the outgrowth of a pontifical bull of the 15th century, which granted absolu-

tion to minor malefactors, for a money consideration. It depends upon a community of sentiment rather than organization for its strength, and its members are bound not to seek redress at law, nor to give evidence in court. The boycott and blackmail are the usual means of offense, but violence is often resorted to. Members of the society emigrating to the U. S. have established branches in New York, New Orleans, and elsewhere. On the night of Oct. 15, 1890, David C. Hennessy, chief of police of New Orleans, was assassinated before his own house by members of the Mafia to whose members he had traced a number of crimes. The officer received six wounds. Eleven Italians were arrested, charged with the murder. By the 15th of the following Mar., several of the prisoners had been acquitted and, despairing of convicting any of them on account of their disregard of oaths, a mob of enraged citizens headed by a lawyer named Parkerson, broke into the jail and put to death the 11 prisoners, including those who had been acquitted. In consequence of the delay in bringing to justice the perpetrators of this deed, the Italian government made a protest against this violation of the rights of Italian citizens, and the U. S. arranged the matter amicably by paying an indemnity to the families of the murdered Italians.

Mafia.—See HARRISON, BENJAMIN, 267.

Magalhães, Fernão de.—(1480-1521.) A Portuguese navigator and the discoverer of Magellan Strait and of the Philippines in 1521 where he was killed by the natives on the island of Mactan.

Magdalen Islands.—A group, 54 miles northwest of Cape Breton near the center of the Gulf of St. Lawrence, and about the same distance north from Prince Edward Island. Pop., 3,172.

Magdeburg.—The capital of Saxony, Prussia, on the Elbe. It is one of the leading commercial cities of Germany, and the center of the sugar trade. Pop., 229,663.

Maggiore, Lago.—A large lake of northern Italy, between Italy and Switzerland. It is famed for its picturesque scenery. Its length is 37 miles, and it is 645 feet above sea-level.

Magi.—The priestly caste of ancient Persia. It is also the name given to the "Wise Men" who did homage to Jesus at his birth at Bethlehem.

Magic Power Interpreted (Indian mythology).—1649-50.

Magna Charta.—The great charter of the liberties of England which the barons forced from King John at Runnymede, June 15, 1215.

Magnesia.—An ancient city of Ionia, Asia Minor, 14 miles southeast of Ephesus. It was noted for its beautiful temple of Artemis Leucophryne (Diana). The frieze, representing combats between the Greeks and Amazons, is now in the Louvre.

Magnolia, The.—2813.

Magoon, Elias Lyman.—(1810-1886.) A Baptist clergyman and writer. His works include "Orators of the American Revolution" and "Republican Christianity."

Magruder, John Bankhead.—(1810-1871.) He was graduated from West Point, entered the army

and served in the Mexican War. At the outbreak of the Civil War he offered his services to the Confederate government and was made a maj.-gen. He served in Va. in 1862 and was then sent to the southwest, where he commanded in Tex., La., and Ark., until the surrender in 1865. Magruder then went to Mexico and served for a time with Maximilian, until the latter was captured and executed.

"Mahabharata," *The*.—1683.

Mahan, Alfred Thayer.—Born 1840. A naval officer and writer. He became midshipman in 1859, lieut. in 1861, lieut.-commander in 1865, commander in 1872, captain in 1885, and retired in 1896. He was made president of the U. S. Naval War College, and lecturer on history, strategics, and tactics. In 1894 he was in command of the "Chicago." Among his writings are "The Gulf and Inland Waters," "Influence of Sea-Power upon History, 1600-1783," "Influence of Sea-Power upon the French Revolution and Empire, 1793-1812," and "Life of Admiral Faragut."

Mahan, Asa.—Born at Vernou, N. Y., 1800; died at Eastbourne, England, 1889. A clergyman, educator, and author. He was president of Oberlin College from 1835 until about 1850. He has held similar positions later at Cleveland University and at Adrian College, Mich. Among his works are "System of Intellectual Philosophy," "Science of Logic," and "Critical History of Philosophy."

Mahan, Dennis Hart.—(1802-1871.) A military engineer. He was professor of engineering at West Point from 1832 until his death, and was dean from 1838. He committed suicide by drowning while temporarily insane. His writings include "Treatise on Field Fortifications" and "Military Engineering."

Mahan, Milo.—(1819-1870.) A clergyman of the Protestant Episcopal Church, brother of D. H. Mahan. His chief work is a "History of the Church."

Mahdi (Mohammed Achmet).—The "False Prophet of the Soudan," 1845-1885. Was an Arab fanatic who believed himself to be the true descendant of Mohammed and to be inspired of God. He thought himself empowered to wage a holy war against unbelievers, which led him into a war with England in Egypt, his followers suffering many crushing defeats.

Mahone, William.—Born in Va., 1826; died at Washington, D. C., 1895. A noted Southern soldier and politician. He served in the Confederate army and was famous as a fighter, reaching the rank of maj.-gen. After the war he became a prominent factor in Va. politics. He was active in forming the party known as "Readjusters," which favored a readjustment of the public debt of Va. In 1880 it carried the state, and Mahone was elected to the U. S. Senate, in which he served from 1881 to 1887. Although he was independent of the two great parties, he usually voted with the Republicans. Before his term expired, the Readjuster party had dissolved and disappeared. In person, Mahone

was small and spare, weighing less than 100 pounds. His fighting propensities were conspicuous in politics as in war, and he was a unique and striking character of his time.

Mahony, Francis.—(1804-1866.) Irish poet and journalist; pen-name, "Father Prout."

Mahony City.—A borough in Schuylkill Co., Pa., the center of a coal-mining region. Pop. (1900), 13,504.

Mahrattas.—A famous Hindu confederacy, which had its rise in 1659, and its downfall in 1818, was composed of the several independent tribes ruled at various times by the chiefs Bousla, Sevajee, Scindia, Holkar, and the Guicowar, of Baroda. Each reigning house had its own distinctive territory, though they all raided, not only over the Deccan, but at times over nearly the whole of Hindostan. The British contests with the Mahrattas occurred during the years 1779-81, 1803-04, and 1817-18. In the latter year the Mahratta power was completely broken. The son of the last reigning rajah, who was a British prisoner in the neighborhood of Cawnpur, was the infamous Nana Sahib, whose connection with the mutiny of 1857 is historic.

Maine.—One of the New England States and the northeasternmost of the states of the American Union. The charter granted by Charles I. of England in 1639 included "the Province or Countie of Mayue," because considered a part of "the Mayne Lande of New England," hence the name. It is bounded on the north by the province of Quebec, Canada, east by New Brunswick, south by the Atlantic Ocean, west by N. H. and Quebec. It was visited by the Cabots and other early explorers, and the first permanent settlement was about 1623; the territory was merged into the "province of Massachusetts Bay" in 1691; was admitted into the Union as a state in 1820; a dispute with England as to the northern boundary was not settled till 1842. The surface is generally hilly, and in the northern part mountainous; Mount Katahdin is the highest summit; the coast line is much indented with bays; the chief industries are ship-building, lumbering, fishing, commerce, and agriculture; in the winter ice is cut and shipped in large quantities; second state in the Union in the value of its fisheries. It has 16 counties; the capital is Augusta and the chief city, Portland; other chief towns are Lewiston, Biddeford, Bangor, Auburn, and Bath. Area, 33,040 sq. miles; pop. (1900), 694,466. It is called the Pine Tree State. The "Maine Law," passed in 1851, was the first attempt to prohibit the sale of intoxicating liquors.

"**Maine,**" *The*.—A second-class battleship of the U. S. navy. She was sent to Havana, Cuba, in Jan., 1898, on a peaceful mission, and was received by the Spanish forts and naval vessels in the harbor with the courtesies usually extended to visiting warships of a friendly power. Her anchorage was selected by the Spanish authorities. On the night of Feb. 15, 1898, the "Maine" was destroyed by a submarine mine and two officers and 258 sailors perished. (See SPANISH-

- AMERICAN WAR, in this volume; also SAMPSON, WILLIAM THOMAS, 501.) A new battleship "Maine" is now (1901) in course of construction.
- Maintenon, Françoise d'Aubigné.**—(1635-1719.) Born in prison at Niort, but when 16 years of age met the poet Scarron, who, struck by her beauty, intelligence, and helpless condition, married her. On his death in 1660 she was reduced to great poverty. In 1664 she was intrusted with the education of two sons whom Mme. de Montespan had borne to Louis XIV., and such was her vigilance that she soon became acquainted with the king, fascinating him. She was privately married to Louis XIV. in 1684, about 18 months after the death of the queen. On the death of the king she retired to the Abbey of St. Cyr, where she died.
- Mainz, or Mayence.**—The most strongly fortified city in the German empire, situated in one of the most fertile wine-producing districts of Germany. It stands on the left bank of the Rhine near the junction of the Main. Pop., 72,934.
- Maistre, Joseph Marie, Comte de.**—(1754-1821.) Celebrated French statesman, philosopher, and author.
- Maize.**—A grass, native to America where it was found in cultivation by Columbus, by whom it was taken to Spain. The product of the U. S. for the year 1900 was 2,105,102,516 bushels, valued at \$715,720,034.
- Majorca.**—The largest island of the Balearic group; 107 miles southeast of the mouth of the Ebro and 171 miles north of Algiers. Its length is 64 miles, width, 48 miles; area, 1,386 sq. miles. Pop., 262,900.
- Majuba Hill.**—A height in the Drakenberg Mountains, South Africa. Here Feb. 27, 1881, Gen. Sir George P. Colley with a force of 700 British troops were defeated by about 450 Boers.
- Malabar.**—A maritime district in the presidency of Madras, British India. Area 6,050 sq. miles. Pop., 2,365,035.
- Malacca.**—A British maritime province on the southwest coast of the Malay Peninsula, 40 miles long, and including the district of Nanning 25 miles wide. Area, 1,000 sq. miles. Pop., 20,000.
- Malaga.**—A city and seaport of Spain, capital of a province of the same name, famous for its wines. It is estimated that the vineyards of Malaga produce annually from 35,000 to 40,000 pipes of wine of which 27,000 pipes are exported. It was founded by the Phœnicians and has enjoyed a commercial importance for 3,000 years. Pop., 134,016.
- Malay Archipelago.**—A large and important island group, bounded on the north by the China Sea, on the east by the Pacific Ocean, and on the south and west by Australia and Indian Ocean. The principal groups are the Sunda Islands, including Sumatra and Java; the Philippines, ceded by Spain to the U. S. in 1898; Celebes and the Salayer Islands, and the Moluccas. Native rajas rule most of the islands, but Great Britain possesses some of them, while the Dutch East Indies include the greater and richer portion of the Archipelago, with rights of suzerainty over the native princes.
- Malay Peninsula.**—One of the world's most important commercial centers. Bounded on the north by lower Siam; east and south by the Lower China Sea, west by the Malacca Strait. Its chief city is Singapore.
- Malcolm, Sir John G. C. B.**—(1769-1833.) British historian and statesman; distinguished at the siege of Seringapatam 1792.
- Malden.**—A city in Middlesex Co., Mass., on the Malden river; pop., (1900), 33,664.
- Malebranche, Nicolas.**—(1638-1715.) A French metaphysician of the general school of Descartes, but who rejected the latter's dualistic theory of mind. He taught that God is the real ground of existence and of thought. His chief work is entitled "Search for Truth."
- Malsherbes (mâl-zârb'). Cbrétien Guillaume de Lamignon de.**—(1721-1794.) A French statesman who served in various offices under Louis XVI. In the revolution he was accused of treason, condemned by the tribunal, and suffered death by the guillotine.
- Mallard, Tbe.**—See DUCKS, 2498.
- Mallock, Wm. H.,** age 52; a brilliant Oxford man who flashed into fame with "The New Republic" (1876), a satire on the leading thinkers of the day; has since written much in philosophy, economics, travel, fiction, verse; a keen though perverse thinker, an incessant opponent of Socialism and scientific scepticism.
- Malone.**—Capital of Franklin Co., N. Y., on the Salmon River; pop. (1900), 5,935.
- Malone, Edmund.**—(1741-1812.) An Irish scholar and critic, noted chiefly for editing the works of Shakespeare.
- Malory, Sir Thomas.**—(About 1430-1470.) Famous as the author or compiler and translator of the prose romance of "Morte Arthure," which treats of the life and death of King Arthur and the knights of the Round Table.
- Malplaquet.**—A village in the department of Nord, France, near the Belgian frontier. It was the scene of a victory in 1709 of the allied English, Dutch, and Austrian armies over the French.
- Malta.**—An island 17 miles long, nine miles wide, with an area of about 115 square miles, situated in the Mediterranean. It is a British possession and has a population of about 170,000.
- Malthus, Thomas Robert.**—(1766-1834.) Church of England clergyman and author of "Essay on the Principles of Population as it Affects the Future Improvement of Society."
- Malvern Hill (Va.).**—The scene of a desperate fight between the Army of the Potomac and the Confederate forces, July 1, 1862.
- Malvern Hill (Va.), Battle of.**—This was the last of the series of engagements known as the "Seven Days' Battles" at the close of the Peninsula campaign against Richmond (May-June, 1862.) The Union army, under McClellan, had steadily retreated, fighting daily to beat off the active Confederates. On the morning of July 1, McClellan took up a strong position on

Malvern Hill—a high plateau near the James River. A large number of cannon were posted advantageously for defense. The Confederates attacked with great energy and bravery, but were able to accomplish nothing and after five hours of hard fighting they drew off, after having sustained a heavy loss. That of the Union army was comparatively small. During the night McClellan continued his retreat and reached Harrison's Landing, on the James River, where his army was covered by the gunboats.

Mamelukes.—An Arabic word meaning slaves. The name given in Egypt to the servants of the beys, who constituted their armed force.

Mammoth Cave.—The largest known cave in the world, in Edmondson Co., near Green River, Ky., 75 miles southwest of Louisville. It extends over an area of about ten miles in diameter, and consists of numerous chambers, connected by avenues, which are said to aggregate 150 miles in length. It contains a river with eyeless fish. The stalactites are of great beauty.

Man, Creation of (Koran).—1740.

Man, Isle of.—Situated in the Irish Sea; area, about 145,325 acres. It has a government of its own, and is to a great extent independent of the English Parliament.

Man, What Is It to be a.—4259.

Man and His Career, The.—4775.

Manassas (Va.), Battle of.—This notable battle of the Civil War was fought Aug. 29 and 30, 1862, on almost the same spot on which took place the battle of Bull Run, July 21, 1861. To distinguish between them, the latter of these engagements is usually called the battle of Manassas; the Confederates styled it the battle of Groveton, the name of a small hamlet on the field. After McClellan had been baffled in his attempt to take Richmond by way of the Peninsula (May-June, 1862), and while his army was lying at Harrison's Landing, on the James River, another army was organized near Washington. It was composed of the troops of McDowell, Banks, and Fremont, and its command was given to Gen. John Pope. During August he advanced by the direct route and threatened Richmond. He was opposed by "Stonewall" Jackson, who held him in check until Gen. Lee arrived with a strong Confederate reinforcement from the Peninsula. Several corps of the Army of the Potomac were transported by steamboats to Alexandria and pushed out to augment the force of Pope. The battle at Manassas was desperately fought and resulted in Pope's army being defeated, and driven in much disorder back to the line of the Potomac, causing for a time great apprehension and alarm at Washington. That this was not wholly groundless, was shown by the immediate campaign of Lee north of the Potomac, into Maryland, culminating in the battle of Antietam. As a result of the defeat at Manassas, Gen. Pope filed charges against Gen. Fitz John Porter, alleging that he had failed to obey his orders and thereby contributed largely to

the disastrous result of the battle. Porter was tried by a court-martial and was convicted and cashiered. Twenty-three years later, largely through the influence of Gen. Grant, who believed that injustice had been done, the action of the court was reversed and Porter was restored to the army. The Federal loss in the battle was above 13,000; that of the Confederates was about 8,000.

Manchester.—(1) A town in Hartford Co., Conn., 7 miles east of Hartford. It has silk and paper manufactures; pop. (1900), 10,601. (2) One of the capitals of Hillsborough Co., N. H., on the Merrimac River. It is the largest city in the state and has extensive and important cotton and woolen manufactures.

Manchester.—The chief cotton-manufacturing city of England. Pop., with suburbs, about 700,000.

Manchuria.—A dependency of China, lying on the northeastern boundary of China proper. Its political importance is largely due to the fact that it is coveted by Russia for the needs of the Siberian railway.

Mandalay.—The capital of Burmah, is situated 3 miles from the Irrawaddy River. It was captured by the British in 1885. Pop., about 100,000.

Mandan Indians.—A tribe of the Sioux stock which was almost exterminated by small-pox in 1837. The survivors now number about 250 and live on the Fort Berthold reservation in N. Dak.

Mandeville, Sir John.—(1300-1372.) A credulous English traveler who for 33 years traveled in Europe, Asia, and Africa and after returning to England wrote his experiences in English, French, and Latin. His works are of little value either as descriptive or historic geography.

Mandrill, The.—See MONKEY, 2453.

Manetho.—A celebrated Egyptian historian, a native of Sebennytus who flourished 275 B.C.

Manganese.—A metal of a grayish-white color, much used in the manufacture of steel. About 220,000 tons were produced in the U. S. in 1900, at an average value of \$2.08 per ton.

Mange.—A disease, somewhat similar to the itch, which affects horses, dogs, and cattle. Minute mites burrow in the skin and cause irritation, heat, and itching, accompanied by falling of the hair. Cleanliness, sulphur, mercurial ointment, and alterative, cooling medicine are indicated.

Mango.—A genus of trees, native to India, which produces a smooth kidney-shaped fruit, in some cases as large as an orange, of a luscious, sweet, or slightly acid, taste. The fruit is a favorite dessert.

Mangum, Willie Person.—(1792-1861.) A Whig politician. He was U. S. Senator from N. C. (1831-36 and 1840-53).

Manhattan Island.—An island at the mouth of the Hudson, between that river on the west, the East River on the east, Spuyten Duyvil Creek and Harlem River on the north, and New York Bay on the South. It forms the principal part of New York City. Greatest width, $2\frac{1}{4}$ miles. Area, about 22 sq. miles.

- Manicheans.**—The followers of Mani, Manes, or Manichæus. The theological system endeavored to combine the essential features of Buddhism, Zoroastrianism, and various other religions with Christianity. It originated in the third century in Babylonia, and spread through Persia and especially the north of Africa, where it developed a form of Gnosticism. Its theology was dualistic, holding to the conflict between light and darkness, and believing in the inherent evil of matter. Its morals were theoretically ascetic. Manicheism is believed to have been influential in the development of the monastic system.
- Manifest.**—A list of a ship's cargo and passengers.
- Manila.**—The capital of the Philippine Islands, situated on Manila Bay, Luzon Island. It exports large quantities of cigars and hemp.
- Manila, Battle of.**—See DEWEY, GEORGE, 160-63.
- Manila Harbor (Philippine Islands), Battle of.**—Prior to the beginning of the war with Spain, the Asiatic squadron of the U. S. had been lying for several weeks at Hong Kong, under the command of Commodore (now Admiral) George Dewey. Upon the issuance of the colonial proclamation of neutrality, the usual 24 hours notice having been given, Dewey repaired to Mirs Bay, near Hong Kong. From there he proceeded, under telegraphic orders from the President, to capture or destroy the Spanish fleet, then assembled at Manila. At daybreak May 1, 1898, the American fleet entered Manila Bay and before noon effected the total destruction of the Spanish fleet, consisting of 10 warships, and a transport, besides capturing the naval station and forts at Cavite. The Spaniards lost 412 men, killed and wounded. Not a life was lost on the American ships and the wounded numbered only seven. (See SPANISH-AMERICAN WAR, in this volume; also DEWEY, GEORGE.)
- Manistee.**—(1) The capital of Manistee Co., Mich., on Lake Michigan. It has the largest shingle manufactures in the world; pop. (1900), 14,260. (2) A river in Mich., flowing into Lake Michigan at Manistee. Length, about 130 miles.
- Manito, or Manitou.**—A spirit worshiped by certain tribes of American Indians. There are two preëminent Manitous, one the spirit of good, the other the spirit of evil. (See LONGFELLOW'S "HIAWATHA," Canto xiv.)
- Manitoba.**—A province of Canada lying north of Minnesota and North Dakota. It is noted for its wheat.
- Manitou.**—A town and summer resort at the foot of Pike's Peak, Col., noted for its mineral springs.
- Manitou.**—A spirit or other object of religious reverence among certain tribes of the American Indians.
- Manitoulin islands.**—A group of islands in the northern part of Lake Huron. They belong to Ontario, with the exception of one, Drummond Island, which belongs to the state of Michigan.
- Manitowoc.**—The capital of Manitowoc Co., Wis., on Lake Michigan, at the mouth of the Manitowoc River. Pop. (1900), 11,786.
- Mann, Horace.**—Born at Franklin, Mass., 1796; died at Yellow Springs, Ohio, 1859. An educator noted for his reforms in the Mass. school system. He was admitted to the bar in 1823; secretary of the Mass. board of education (1837-48); a Whig member of Congress from Mass. (1848-53); president of Antioch College, Yellow Springs (1852-59); and unsuccessful Free-soil candidate for governor of Mass. in 1852.
- Manner.**—1182.
- Manners, The Talisman of Good.**—4379.
- Mannheim, or Manheim.**—A city and important commercial center of Baden, Germany. It has extensive manufacturing interests. Pop. (1890), about 80,000.
- Manning, Daniel.**—Born at Albany, N. Y., 1831; died there, 1887. A Democratic politician, Secretary of the Treasury (1885-87).
- Manning, Henry Edward.**—(1808-1892.) A noted English cardinal; author of several religious works.
- Manor.**—In English law, a freehold estate held by the lord of the manor, who is entitled to maintain a tenure between himself and the copyhold tenants, whereby a sort of feudal relation is kept up between them. Manors closely resemble the feudal estates held in Scotland by all proprietors of land. Manors of the English type were granted in the U. S. in several of the colonies, on such terms that property right carried right of jurisdiction. In 1636 the proprietor of Maryland ordered that every grant of 2,000 acres should be made a manor.
- Mansfield.**—The capital of Richland Co., Ohio; an industrial and railroad center. Pop. (1900), 17,640.
- Mansfield (La.), Battle of.**—See SABINE CROSS-ROADS, BATTLE OF.
- Mansfield, Joseph King Fenno.**—Born in New Haven, Conn., 1803; died Sept. 18, 1862, from a wound received in the battle of Antietam, Md. He was an officer of high capacity and merit and commanded a corps in the Army of the Potomac, at the head of which he received his fatal wound.
- Mansfield, Mount.**—A peak of the Green Mts., Vt.; height, 4,070 feet.
- Mansfield, Richard.**—Born in Helgoland, 1857. A prominent American actor.
- Manshan.**—The largest of the Elizabeth Islands situated northwest of Martha's Vineyard, Mass.
- Mantineia.**—An ancient city of Greece, situated in Arcadia, southwest of Corinth. It was the scene of several battles, the most famous of which was fought in 362 B.C., when Epaniondas leading the Thebans defeated the Spartans and their allies.
- Manual Training as a Factor in Education, 3615.**
 Changed conditions and New Social Needs, 3618.
 Influence of Manual Training on the Lives of Great Men, 3619.
 The Health of the Children, 3621.
 The Ideal School, 3622.
 Snggestions to Parents, 3622.
- Manual Training, How Parents may Help.**—3643.
- Manual Training, The Importance of.**—3624.

- Manual Training, What Professional Men Think of.**—3637.
Manual Training, What the Work Should be.—3656.
Manufacturing, Conditions of Success in.—5136.
Man with the Iron Mask.—A famous French prisoner, confined in the Bastille and other prisons, during the reign of Louis XIV. His identity was never disclosed; he wore constantly an iron mask covered with velvet; died in the Bastille.
Manzanillo.—A seaport of Cuba; exports coffee, sugar, and other tropical products.
Maoris.—The primitive people of New Zealand; members of the Malay family, a capable and vigorous race.
Maple, The.—2809.
Maracaibo, or Maracaybo.—In South America, a seaport of Venezuela and a leading commercial city.
Marat, Jean Paul.—(1744-1793.) A noted French revolutionist; assassinated by Charlotte Corday.
Marathon.—A plain, 18 miles from Athens, in Attica, Greece. It is noted for the battle fought here in 490 B. C. between the Greeks—numbering 11,000 under Miltiades—and the Persian army of 100,000 under Datis and Artaphernes; in which the Persians were defeated and the conquest of Greece as planned by Darius was frustrated.
Marblehead.—In Massachusetts, a seaport and summer resort; it has boot and shoe manufactures and a noted fishing industry.
Marcellus, Marcus Claudius.—A famous Roman general who fought with success in the Second Punic War against Hannibal. He was slain in a skirmish in 208 B.C.
March was the first month of the Roman year and was so considered in England until the change in the Calendar in 1752.
March, Francis Andrew.—Born at Millbury, Mass., 1825. A philologist and Anglo-Saxon scholar. He became professor of the English language and comparative philology at Lafayette College (Easton, Pa.) in 1858. His writings include "Method of Philological Study of the English Language" and "Comparative Grammar of the Anglo-Saxon Language."
March to the Sea.—The famous march of Gen. William T. Sherman from Atlanta to Savannah, through the heart of Georgia in Nov. and Dec., 1864. After the capture of Atlanta by Sherman (Sept. 1, 1864), Gen. Hood led the Confederate army northward for a campaign in Tennessee, his purpose being to draw Sherman away from Atlanta. Leaving a detachment to occupy the city, Sherman followed with the greater part of his army. As soon as he was fully convinced of Hood's intention to pass north of the Tennessee River, he detached the 4th and 23d, corps under Gen. Thomas, to take care of Hood, and with the rest of his forces, he hurried back to Atlanta. He destroyed a large portion of the city and with 60,000 men started, Nov. 15, for the seacoast. His ultimate purpose was to pass northward into Virginia and join his army to that of Grant. The march to Savannah occupied 27 days. No serious opposition was encountered, for nearly all the fighting men of the Confederacy were in the armies of Lee and Hood. Every possible effort was made to harass Sherman and impede his march, but no body of troops could be collected that was able to stand for an hour against the momentum of Sherman's columns. There was some fighting now and then, but Sherman's losses during the entire campaign up to the capture of Savannah were but 600. Supplies along the line of march were abundant. They were gathered daily by a regularly organized force of foragers, and the exploits of "Sherman's Bummers" became historic as a feature of the war. The army reached the seacoast with its men and animals in the best possible condition. During this march Gen. Howard commanded the right wing, consisting of the 15th and 17th corps, and Gen. Slocum the left wing, comprising the 14th and 20th corps. The cavalry corps was commanded by Gen. Kilpatrick.
Marconi, Guglielmo.—An Italian electrician and physicist, born at Bologna, 1874. He is celebrated for his system of wireless telegraphy, which was first tested in England in 1896. Was educated at Leghorn and Bologna University; mother an English woman. His patents will revolutionize telegraphy. He has succeeded in sending a message 1,551 miles; and 2,000 miles of signal. His chief experiment station is at Sydney, Cape Breton.
Marcy, Mount.—(Named from W. L. Marcy.) The highest summit of the Adirondacks, N. Y., in Keene, Essex Co. Height, 5,345.
Marcy, Randolph Barnes.—Born at Greenwich, Mass., 1812; died at Orange, N. J., 1887. A general, father-in-law of Gen. McClellan. He graduated at West Point in 1832; served in the Mexican War, during which he was appointed captain; was appointed chief of staff to Gen. McClellan in 1861; was commissioned brig.-gen. of volunteers in the same year; was made inspector-general of the U. S. army in 1868; was retired in 1881. Among his writings are "Explorations of the Red River in 1852," "The Prairie Traveller," and "Thirty Years of Army Life on the Border."
Marcy, William Learned.—Born at Southbridge, Mass., 1786; died at Ballston Spa., N. Y., 1857. A statesman. He served in the War of 1812; was U. S. senator (Democratic) from N. Y. (1831-33); governor of N. Y. (1833-38); Mexican claims commissioner (1839-42); Secretary of War (1845-49); Secretary of State (1853-57).
Mare Island.—An island in San Pablo Bay, western Cal., near San Francisco. It contains the U. S. navy yard.
Marengo.—A small village 3 miles from Alessandria, Italy, where, in 1800, Napoleon completed the conquest of northern Italy, by defeating the Austrians.
Margaret.—
 1. MARGARET OF ANGOULÊME, OR OF ANJOU, OR OF VALOIS, OR OF NAVARRE.—(1492-1549.) Queen of Navarre, for a time favorable to Prot-

estantism, and later abandoned it. Famous as a patroness of literature, and author.

2. **MARGARET OF ANJOU.**—(1430-1482.) Queen consort of Henry VI. of England. Upon the insanity of her husband, the struggle between her and the Duke of York for the regency, was the beginning of the disastrous Wars of the Roses. Her husband died in the Tower, her son, the heir apparent, was slain, and she herself was captured, and was released only upon her renouncing all claims to the throne. Louis XI. paid her ransom and she returned to France.

3. **MARGARET OF AUSTRIA.**—(1480-1530.) Regent of the Netherlands from 1507 to her death

4. **MARGARET OF AUSTRIA, OR OF PARMA.**—(1522-1586.) Regent of the Netherlands from (1559-67).

5. **MARGARET OF BURGUNDY.**—(1446-1503.) Sister of Edward IV. of England, wife of Charles, duke of Burgundy. She was a patron of Caxton, the famous printer.

6. **MARGARET OF SCOTLAND.**—(About 1425-1445.) Daughter of James I. of Scotland and wife of Louis (later Louis XI.) of France.

7. **MARGARET OF VALOIS, OR OF FRANCE.**—(1553-1615.) Daughter of Henry II. and Catharine de' Medici, and wife of Henry of Navarre. This marriage made possible the massacre of St. Bartholomew.

8. **MARGARET TUDOR.**—(1489-1541.) Daughter of Henry VII. of England, queen of James IV. of Scotland, and mother of James V. of Scotland.

Maria de' Medici.—(1573-1642.) The daughter of Francis I. Grand Duke of Tuscany, was the second wife of Henri IV. of France.

Mariana.—The name given by a colonist, John Mason, to the territory granted to him between the Salem River and the Merrimac.

"**Maria Teresa,**" **The.**—The flagship of Admiral Cervera, who commanded the Spanish fleet that endeavored to escape from the harbor of Santiago, July 3, 1898, and was entirely destroyed by the U. S. fleet. The "Teresa" was the first to emerge from the harbor but she was soon disabled by shot and shell and sank. A large part of her crew were killed or drowned. As many as possible were succored by boats from the U. S. ships. Admiral Cervera was rescued from the water and taken on board the battleship "Iowa." After the war the "Teresa" was raised and floated, and an attempt was made to tow her to a U. S. port. Under stress of weather it was deemed necessary to cut the towline and the "Teresa" drifted ashore on Cat Island, one of the West India group, and became a total wreck.

Maria Theresa.—(1717-1780.) Empress of Germany. Her claim was the cause of the War of the Austrian Succession.

Marie Antoinette de Lorraine.—(1755-1793.) The wife of Louis XVI. of France and daughter of Maria Theresa. In 1792 during the French Revolution she was imprisoned in the Temple. On Oct. 16, 1793, she was executed.

Marietta.—The capital of Wash. Co., Ohio, at the junction of the Muskingum and Ohio rivers. It is the seat of Marietta College, founded in 1835. Pop. (1900), 13,348.

Marigold, The.—2900.

Marine, Secretary of.—Up to 1781, the Board of Admiralty had supervision of all naval affairs. Feb. 7 of that year the Continental Congress created the office of Secretary of Marine, whose duties corresponded to those of the present Secretary of the Navy. Before the end of that year, however, the duties of the office were transferred to the Treasury Department.

Marine Corps.—Established by an act of the Continental Congress, Nov. 10, 1775. An act of Congress, July 11, 1798, reestablished the corps and provided that the marines, while subject at all times to the laws and regulations of the navy, were liable at any time to do duty in the forts and garrisons of the U. S. There was no regimental organization contemplated, but the corps was to be formed into companies as the President might direct. The corps now numbers about 5,500 officers and men.

Marion.—The capital of Marion Co., Ohio. Pop. (1900), 11,862.

Marion, Francis.—Born at Winyaw, near Georgetown, S. C., 1732; died near Eutaw, S. C., 1795. A Revolutionary general and partisan leader in S. C. (1780-82). He served at Eutaw Springs in 1781.

Mariposa Estate.—A large tract of land in Mariposa County, Cal., that was acquired by John C. Fremont soon after the conquest of that territory by the U. S. He had a long and celebrated litigation growing out of his possession, but his title was at length confirmed by the Supreme Court of the U. S. (See FREMONT, JOHN CHARLES, 208.)

Mariposa.—(1) A county in the central part of Cal., in which are the Yosemite Valley and the Big Tree Grove. (2) Mariposa Grove. A grove of gigantic trees in Mariposa Co., Cal.

Marketing.—2280.

"**Mark Twain.**"—The literary pseudonym of Samuel L. Clemens. (See CLEMENS, SAMUEL LANGHORNE, 122.)

Marlborough.—A town in Middlesex Co., Mass. It has boot and shoe manufactures. Pop. (1900), 13,609.

Marlowe, Christopher.—(1565-1593.) An English dramatist.

"**Marmion**" **Case.**—The S. C. legislature in 1822 passed a law providing that any free negroes entering the ports of that state on ships could be imprisoned until the departure of the vessels. This was done in the case of negroes on board the "Marmion." The district court of the U. S. in 1823 decided that this law was contrary to the Constitution and incompatible with the international obligations of the U. S. The attorney-general rendered a similar opinion in 1824.

Marmora, Sea of.—A small sea between European and Asiatic Turkey. It is connected with the Ægean Sea by the Straits of Dardanelles and with the Black Sea by the Bosphorus or Strait of Constantinople.

- Marmoset, The.**—See **MONKEY**, 2454.
- Marquette.**—The capital of Marquette Co., Mich.; it exports iron ore. Pop. (1900), 20,058.
- Marquette, Jacques.**—Born at Laon, France, 1637; died near Lake Michigau, 1675. A Jesuit missionary and explorer in America. He accompanied Joliet in his voyage down the Wisconsin and Mississippi rivers, and up the Illinois River in 1673. He died while attempting to establish a mission among the Illinois Indians. He wrote an account of the expedition of 1673, entitled "Voyage et découverte de quelques pays et nations de l'Amerique Septentrionale."
- Marr, Carl.**—Born at Milwaukee, Wis., 1859. A figure-painter. He studied at Berlin and at Munich. Among his works are "The Mystery of Life," "The Flagellants," and "1806 in Germauy."
- Marriage Help or Hinder? Does Early.**—4895.
- Marryat, Florence.**—(1837-1899.) An English novelist, daughter of Frederick Marryat.
- Marryat, Frederick.**—(1792-1848.) The English sailor and novelist. Best known as the writer of "Peter Simple," "Midshipman Easy," etc.
- Mars.**—See **GREEK AND ROMAN MYTHOLOGY**, 1616.
- Mars.**—See **PLANETS**, 2990.
- Marseilles.**—The foremost seaport of France and the most important on the Mediterranean. Pop., 442,239.
- Marsh, George Perkins.**—Born at Woodstock, Vt., 1801; died at Vallombrosa, Italy, 1882. A philologist, diplomatist, and politician. He was member of Congress from Vt. (1842-49); and U. S. minister to Turkey (1849-53) and to Italy (1861-82). His works include "Compendious Grammar of the Old Northern or Icelandic Language," "Lectures on the English Language," and "Origin and History of the English Language."
- Marsh, Othniel Charles.**—(1881-1899.) A distinguished paleontologist, professor at Yale University since 1866. His special study is the extinct vertebrates of the U. S. Among his writings are "Odontornithes; a Monograph on the Extinct Toothed Birds of North America," and "Dinocerata; a Monograph on an Extinct Order of Gigantic Mammals."
- Marshall.**—(1) The capital of Calhoun Co., Mich., on the Kalamazoo River; pop. (1900), 4,370. (2) The capital of Harrison Co., Tex.; pop. (1900), 7,855.
- Marshall, Humphrey.**—(1812-1872.) A politician and soldier. He was member of Congress from Ky. (1849-52 and 1855-59); U. S. commissioner to China (1852-53); and later a Confederate general and member of Congress.
- Marshall, John.**—Born in Fauquier Co., Va., 1755; died at Philadelphia, 1835. A celebrated jurist. He served in the Revolution; member of the Va. Convention to ratify the Constitution in 1788; U. S. envoy to France (1797-98); member of Congress from Va (1799-1800); secretary of state (1800-01); and chief-justice of the U. S. Supreme Court (1801-35). He published "A Life of Washington" (5 vols., 1804-07), the first volume of which was published separately under the title of "A History of the American Colonies."
- Marshall, John.**—Jurist; sketch of, 400.
- Marshall Pass.**—A noted pass in the Cordilleras of Col. It is traversed by railway. Height, 10,841 feet.
- Marshalltown.**—The capital of Marshall Co., Iowa, on the Iowa River. Pop. (1900), 11,544.
- Marsh Hen, The.**—See **RAIL**, 2519.
- Marston, Philip Bourke.**—(1850-1887.) An English essayist, poet, and novelist. He was blind from early boyhood.
- Marston Moor.**—The scene of a battle between Cromwell's "Ironsides" and the Royalist troops, near York, England, in 1644, in which the Royalists were defeated.
- Martha's Vineyard.**—An island southeast of Mass., to which it belongs. It forms the chief part of Duke's Co., is separated from the mainland by Vineyard Sound (about 5 miles wide), and is a summer resort.
- Martial Law.**—A system of government under the direction of military authority. It is an arbitrary kind of law, proceeding directly from the military power and having no immediate constitutional or legislative sanction. It is only justified by necessity, and supersedes all civil government. Suspension of the writ of habeas corpus is essentially a declaration of martial law. "In this case," says Blackstone, "the nation parts with a portion of liberty to secure its permanent welfare, and suspected persons may then be arrested without cause assigned."
- Martin, Alexander.**—(1740-1807.) A politician and Revolutionary officer. He was elected governor of N. C. in 1782; reëlected in 1789; was a member of the Constitutional Convention of 1787; served in the U. S. Senate (1793-99).
- Martin, François Xavier.**—Born at Marseilles, 1764; died at New Orleans, 1846. A judge of the supreme court of La. (1815-45). He published histories of N. C. and of La.
- Martin, Homer D.**—(1836-1897.) A landscape painter. He was elected national academician in 1875.
- Martin, Luther.**—Born at New Brunswick, N. J., died at New York, 1826. A noted lawyer. He was attorney-general of Md. (1778-1805), and in 1787 was a member of the convention which framed the U. S. Constitution. He left the convention to avoid signing the Constitution. He was reappointed attorney-general in 1818, but two years later was disabled by paralysis. In 1822 the legislature of Md. passed an act requiring every lawyer in the state to pay annually a license fee of \$5.00 for the benefit of Luther Martin.
- Martin, The.**—See **SWALLOW**, 2580.
- Martineau, Harriet.**—(1802-1876.) An English authoress who has achieved great distinction in spite of her deafness from early youth. She did successful work in attempting to popularize political economy.
- Martinsburg.**—The capital of Berkeley Co., West Va. Pop. (1900), 7,564.
- Marvell, Andrew.**—(1620-1678.) An English writer and politician, and assistant-secretary to Milton.

Mary.—

1. **MARY**, the mother of Jesus, usually called the "Virgin Mary." According to the narrative of the gospels, Jesus was conceived by the Holy Ghost. She was married to Joseph, a carpenter, and lived in the village of Nazareth. The Roman Catholic Church holds the doctrine of the immaculate conception and the consequent sinlessness of Mary. She is called the "Madonna" in art.

2. **MARY I. (TUDOR)**.—(1516-1558.) Queen of England, daughter of Henry VIII. and Catharine of Aragon. She is known as "bloody Mary" from her persecution of heretics, about 300 of whom were burned at the stake during her reign. She also approved the execution of Lady Jane Grey, her rival claimant of the throne.

3. **MARY II.**—(1662-1694.) Queen of England. She wedded William of Orange, with whom she sided in the struggle against her father, James II.

4. **MARY (STUART) QUEEN OF SCOTS.**—(1542-1587.) A claimant to the throne of England in opposition to Queen Elizabeth. She wedded the French dauphin (Henry II.) after whose early death she wedded Lord Darnley, the next heir after herself of the English throne. Darnley's participation in the murder of her favorite, Rizzio, created great scandal and a matrimonial estrangement. After many and great misfortunes she was beheaded upon the charge of conspiring against the life of Elizabeth.

5. **MARY OF BURGUNDY.**—(1457-1482.) Daughter of Charles the Bold, wife of the German emperor Maximilian.

6. **MARY OF EGYPT, Saint.**—An African anchoress about whom many legends have clustered. She repented of the infamy of her early life, betook herself to the desert, and is said to have wrought many miracles. St. Jerome says that she lived in Alexandria in the year 365.

7. **MARY OF FRANCE.**—(1496-1533.) Daughter of Henry VII. of England, wife of Louis XII. of France, and later of the duke of Suffolk. Her daughter was mother of Lady Jane Grey.

8. **MARY OF GUISE, OR OF LORRAINE.**—(1515-1560.) Queen of James V. of Scotland, mother of Mary Queen of Scots, and regent of Scotland.

9. **MARY OF MODENA.**—(1658-1718.) Queen of James II. of England, who was driven out by William of Orange.

10. **MARY MAGDALENE, OR MAGDALEN, OR MAGDALA.**—A woman mentioned in the gospels, out of whom Jesus cast seven devils, and who was thereafter a devoted follower of him. She is a favorite subject in art.

Maryland.—One of the thirteen original states in the U. S. of America, usually classified as one of the Southern States. Bounded on the north by Pa., east by Del. and the Atlantic Ocean, south by Chesapeake Bay, Va., and W. Va., and by the two latter on the west; named in honor of the wife of Charles I. of England. In the early days, Md. was a proprietary colony, under a grant issued to Lord Baltimore in 1632; later it became a royal province. It took an active part

in the Revolutionary War, and ratified the Federal Constitution in 1788. The state suffered much from the incursions of the British during the War of 1812-14. It was one of the slave states, but remained loyal to the Union during the Civil War, although a large number of its citizens volunteered in the Confederate service. In Sept., 1862, Gen. Lee, with a Confederate army of sixty thousand men, crossed the Potomac into Md. and the great battles of South Mountain and Antietam resulted, after which Lee returned to Va. The western part is mountainous and yields much coal and iron; the eastern part is generally level and produces wheat, corn, and tobacco; it has many quarries of marble, granite, and slate; Chesapeake Bay and the Potomac River furnish excellent facilities for commerce; it is celebrated for its production of oysters. Annapolis is the capital, and Baltimore its chief city; other towns of importance are Cumberland, Frederick, and Hagerstown. It has 23 counties; area 12,210 sq. miles. Pop. (1900), 1,190,050.

Maryland in Liberia.—A negro colony to the eastward of Cape Palmas, in what is now the Republic of Liberia, Africa, founded by the Maryland State Colonization Society in 1834. John Russworm, a citizen of Monrovia, was chosen the first governor in 1836. In 1837 it became part of Liberia.

"**Maryland! My Maryland!**"—A popular song of the Confederates in 1861-65, written by J. R. Randall in 1861. It was sung to the college tune of "Lauriger Horatius."

Marysville.—The capital of Yuba Co., Cal., at the junction of the Yuba and Feather rivers. It is a fruit center with flourishing trade. Pop. (1900), 3,497.

Masaba Heights.—A range of hills in northeastern Minn., famous for their iron ores.

Masaccio.—3412.

Masham, Lady (ABIGAIL HILL).—One of Queen Anne's intimate friends, daughter of Francis Hill of London. She entered the service of Lady Rivers, afterward that of the Duchess of Marlborough at St. Albas, and later became lady of the bedchamber to Queen Anne in whose favor she at length supplanted the duchess. In 1707 she married Samuel Masham, and in 1711 was given charge of the privy purse of the queen.

Mason, Francis.—Born at York, England, 1799; died at Rangoon, British Burma, 1874. An American Baptist missionary to the Karens in Burma. He published "Burmah, Its people and Natural Productions."

Mason, George.—Born in Fairfax Co., Va., 1725; died there, 1792. A politician. He drafted the Va. declaration of rights and constitution in 1776; was a member of the Constitutional Convention in 1787, but refused to sign the Constitution. He led with Patrick Henry the opposition to its ratification in the Va. convention of 1788.

Mason, James Murray.—Born in Fairfax Co., Va., 1798; died near Alexandria, Va., 1871. A politician, grandson of George Mason. He became U. S. senator from Va. in 1847; drafted the fugi-

- tive slave law in 1850; was expelled from the Senate in 1861; sent as a Confederate commissioner, with Slidell to England and France (1861); captured by Wilkes on the "Trent" (1861); imprisoned at Boston, until Jan. 2, 1862.
- Mason, Jeremiah.**—Born at Lebanon, Conn., 1768; died at Boston, 1848. A lawyer and politician; U. S. senator from N. H. (1813-17).
- Mason, John.**—Born in England, 1600; died at Norwich, Conn., 1672. A colonial commander. He assisted in the migration of the Dorchester settlers to Windsor, Conn., in 1635, and in 1637 commanded the colonial troops in the Pequot War. He wrote "Brief History of the Pequot War."
- Mason, John.**—Born at King's Lynn, England, 1586; died at London, 1635. The founder of N. H. He was appointed governor of Newfoundland in 1615; was granted in 1622 a patent for all land between the Nahumhëik and Merrimac rivers in New England; established himself as deputy-governor at New Plymouth in 1623; formed the Laconia Company in 1629, for the purpose of founding an agricultural settlement. His rights in N. H., were sold to Gov. Samuel Allen in 1691.
- Mason, John Young.**—Born in Greensville Co., Va., 1799; died at Paris, 1859. A politician. He was a representative from Va. (1831-37); Secretary of the Navy (1844-45); attorney-general (1845-46); Secretary of the Navy (1846-49); U. S. minister to France (1853-59).
- Mason, Lowell.**—Born at Medfield, Mass., 1792; died at Orange, N. J., 1872. A musical composer, noted as a teacher. He published many collections of church and Sunday-school music.
- Mason, William.**—Born at Boston, Mass., 1829. A musician and composer. He was a pupil of Moscheles, Liszt, and Dreyschock; has published a pianoforte method and many studies.
- Mason and Dixon's Line.**—The boundary line between Pa. and Md. It is coincident with the parallel of 39° 43' beginning at the Delaware River and running 244 miles westward. It was laid out by two eminent English mathematicians and astronomers, Charles Mason and Jeremiah Dixon, about 1766. Lord Baltimore and William Penn having disputed the boundary between their adjoining grants, the case was taken to London for adjudication and the parties to the suit were ordered to have the line run. The surveyors marked the line with posts, having on one side the arms of Penn and on the other of Lord Baltimore. The line became famous in later days as marking in part the boundary between free and slave states.
- Mason and Slidell.**—See TRENT AFFAIR, THE.
- Massachusettsensis.**—The pseudonym of a Tory during a political newspaper controversy with John Adams (1774-75); the latter upholding the cause of the colonists against the king. (See ADAMS, JOHN, 5.)
- Massachusetts.**—One of the New England States and one of the thirteen original states of the American Union. Bounded on the north by Vt. and N. H., east by the Atlantic Ocean, south by the Atlantic Ocean, R. I., and Conn., west by N. Y. It was visited by explorers in the early part of the 17th century and was settled by the Pilgrims, who landed on Plymouth Rock in 1620; other settlements were made by the Puritans at Salem in 1628 and at Boston in 1630. The Salem witchcraft delusion was at its height in 1692, when many trials took place. The colony took an important part in the resistance to British oppression, and the first blood of the Revolution was shed within its boundaries, at Lexington and Concord, April 19, 1775, and at Bunker Hill, June 17, in the same year; it ratified the Federal Constitution in 1788. The surface is generally hilly except in the southeast, where it is low and flat; commerce, manufactures, and fisheries are the leading occupations, in all of which it is a leading state; it ranks first in the manufacture of boots and shoes and of cotton and woolen goods. The capital and chief city is Boston; it has a large number of populous manufacturing towns, the principal of which are Worcester, Fall River, Lowell, Cambridge, Lynn, New Bedford, Somerville, Lawrence, Springfield, Holyoke, Salem, Brockton, Chelsea, Haverhill, Malden, and Gloucester. Area, 8,315 sq. miles; pop. (1900), 2,805,346; called the Old Bay State.
- "Massachusetts," The.**—A battleship of the U. S. navy, that participated in the battle of Santiago, July 3, 1898.
- Massachusetts Bay Company.**—A colonizing company chartered in England in 1628, by John Humphrey, John Endicott, and others. The company grew out of the preëxisting Dorchester Company, and was the result of imperiled political and religious rights in England under Charles I. The patentees received a grant of land extending from the Atlantic to the "Western Ocean," in width from a line running 3 miles north of the Merrimac to one 3 miles south of the Charles. Endicott headed a colony which settled at Salem in September, 1628. March 4, 1629, a new charter was granted to the governor and company of Massachusetts Bay, and the old officers were succeeded by John Winthrop as governor, with 18 deputies. In 1630 Winthrop transferred the company headquarters to America and founded Boston. Under his charter, Mass. carried on her government for 55 years.
- Massachusetts Indians.**—A tribe of the Algonquin stock, formerly inhabiting the eastern portion of the present state of Mass. and the basin of the Neponset and Charles rivers. In 1617 they were much reduced by pestilence. In 1650 they were gathered into the villages of the Praying Indians and lost their tribal identity. They were always friendly to the whites.
- Massasoit.**—Born, about 1580; died, 1661. A chief of the Wampanoag Indians, in southeastern Mass. and R. I., and an ally of the Plymouth colonists (1621-61).
- Massey, Gerald.**—Born, 1828. An English poet.
- Massillon.**—A city in Stark Co., northern Ohio, on the Tuscarawas River. It has coal-mines and sandstone quarries. Pop. (1900), 11,944.

Massillon, Jean Baptiste.—(1663-1742.) The great French pulpit orator of whom Louis XIV. said: "Other preachers teach me to think a great deal of them, this man makes me think little of myself."

Massinger, Philip.—(1584-1640.) An English dramatist, noted as the writer of "A New Way to Pay Old Debts." He died in poverty and obscurity.

Massys, Quentin.—3482.

Matagorda Bay.—An inlet of the Gulf of Mexico, south of Texas, at the mouth of the Colorado River. (2) Matagorda Island.—An island near the coast of Texas, southwest of Matagorda Bay.

Matanzas.—A port on the northern coast of Cuba, near Havana. The first encounter of the Spanish-American War took place here, Apr. 27, 1898, when a detachment of the blockading squadron shelled the harbor ports and demolished several works in process of construction.

MATCHES.—

The first attempts at devising some improvement on the clumsy flint and steel method of making fire, that had been in use since the Middle Ages, were made about the beginning of the 19th century. A great many substitutes were invented, some of which were quite ingenious, but all the early ones were unreliable and some really dangerous. The first real improvement was brought about sometime between 1830 and 1840 by the use of phosphorus. The credit for this invention is thought to belong to a young Austrian mechanic, Johann Jrinyi, who hit upon the notion of using phosphorus from seeing it used in some experiments at a lecture.

Phosphorus is an element that is found in a considerable number of substances in nature, but that is never found uncombined. One of the commonest sources from which it is obtained is the bones of animals, in which it is always found in combination with calcium and oxygen. When extracted from bones, and obtained in the free state, phosphorus is a yellow, waxy substance, which must be kept under water and out of the light to keep it from undergoing chemical changes that completely alter its properties. When exposed to the air phosphorus gives off white fumes similar to those you see when a match is moistened and drawn across any object. These fumes are caused by the chemical action of the oxygen of the air upon the phosphorus, and if the latter is heated a little by rubbing it against something it suddenly takes fire and burns with great violence. This tendency of phosphorus to combine with oxygen so readily and so energetically is the property that makes it useful in match making. It also explains why that metal is never found free in nature, for whenever exposed to oxygen it combines with it, forming an oxide of phosphorus.

At the time when Jrinyi conceived the idea of using phosphorus in the manufacture of matches, little slips of wood that were tipped

with sulphur, and that could be ignited in various ways, were in common use. He added a little phosphorus to the sulphur and the lucifer match was the result. The small amount of heat produced by drawing the match across a rough surface was sufficient to set fire to the phosphorus; the burning was passed on by the phosphorus to the sulphur, and from the sulphur to the wood. A very similar series of actions is brought about when we strike one of the matches used now, though the sulphur has been replaced by paraffin or stearin, a substance used for making candles.

In the seventy years that have passed since Jrinyi made his discovery the manufacture of matches has been the subject of constant study, and to-day there is scarcely an art that is more nearly perfected in every detail. At first, every operation in the process was performed by hand. The splints were cut, placed in racks, dipped in melted sulphur, set away on stands to dry, then dipped in the mixture containing phosphorus, set away to dry again, and finally removed from the racks and boxed—all by hand. To-day it is no exaggeration to say that blocks of match wood are fed into one end of a match machine and matches boxed ready for sale taken out at the other.

In the most modern type of match-making machinery the match splints are cut from the blocks of wood by a row of punches, which move automatically back and forth across the block, removing a row of splints at every forward stroke. The punches not only cut the splints, but insert them into a long, endless belt, or conveyer, which runs over the block of match wood, and which is provided with rows of holes to receive the splints as they are cut. If you examine an ordinary parlor match you can see at the butt end of it a slightly compressed portion where it was gripped by the conveyer. The splints are first carried by the conveyer to a tank containing melted paraffin, into which they are inserted to a depth of one-half or three-quarters of an inch. This saturates about one-fourth of the splint with paraffin and makes it burn more readily. In the old kinds of matches a sulphur bath was used instead of paraffin, but the paraffin answers the same purpose, and is free from odor when burning, so that now it is always used. The splints are next taken to the "heading tank," in which is contained the phosphorus mixture to form the heads. To apply the phosphorus to the ends of the splints various devices are employed. One very frequently used is a large rotating roller, the lower side of which is in contact with the mixture, which is of such consistency that it keeps the roller coated with a layer just thick enough to form the heads. The conveyer carrying the match splints passes above the roller and just close enough for the ends of the splints to come into contact with it. The phosphorus mixture is quite sticky and enough adheres to the end of each splint to form a head for it. The conveyer now travels

Matches.—*Continued*

a considerable distance to allow the heads to dry thoroughly, and finally passes in front of a row of automatic punches, which force the finished matches out of the holes in which they are held. The matches then fall into a hopper, from which they pass into the boxes automatically placed in position to receive them.

A great many more matches are produced in the United States in this way than in any other, but in recent years an increasing quantity of matches have been made with paper or cardboard instead of wooden splints. These matches are usually made in cards of half a dozen or more matches, and when one is wanted for use it is torn off the card.

In Europe little wax matches, or "vestas," are very much used. These are really very tiny candles with a little phosphorus mixture on the ends for striking. They are rather more expensive than the wooden and paper matches, and on that account, perhaps, have never been manufactured in this country in large quantities.

The most important part of the match is the head, about the composition of which very little has been said. The essential part of the head, of course, is the phosphorus; but this must be mixed in the right proportion with a number of other substances in order to make perfectly satisfactory matches.

The heads of the ordinary parlor matches are composed of a small proportion of phosphorus, generally about one-twelfth of the whole mass, mixed with lamp black, glue, and some substance containing oxygen. The exact proportions in which these substances are mixed are generally kept secret by the factories and much care is bestowed on them as slight variations may do great damage. Too much phosphorus increases the cost of the matches; too little makes them uncertain in their action. A mixture that is too thin makes heads that are too small, and not enough heat is developed to set fire to the splints. When it is too thick, on the other hand, the heads of a number of matches run together, and when they are separated some may ignite and cause accidental destructive fires.

Ordinary matches are sources of two distinct kinds of danger. On account of the ease with which they ignite they are frequently the cause of destructive fires. Rats have been known to carry matches into their holes and there cause them to take fire and do great damage. The other danger from the use of matches is that of poisoning. Phosphorus, in its ordinary form, is one of the most deadly poisons, and absent-minded persons who stick matches into their mouths may suffer severely from their thoughtlessness.

It was to do away with both these dangers that the safety match was invented. You have doubtless seen such matches, and you may have wondered why they could not be ignited by striking them on any other surface than the

one prepared for the purpose. The heads of these matches contain no phosphorus, but are composed of *sulphide of antimony* and *chlorate of potash*. The surface on which they will ignite is covered with a mixture of sand, glue, and a substance known as *red phosphorus*. This latter is obtained by heating common phosphorus in a vessel that contains no air. It is quite different in its properties from the common variety; it does not change in air, is not poisonous, and is much more difficult to ignite. The chlorate of potash in the match heads contains a large proportion of oxygen, and the heat developed by the friction of this substance on the red phosphorus is sufficient to ignite the sulphide of antimony and set fire to the match.

Matches of the kind just described are quite free from both the dangers of common matches, but their manufacture has never been extensively carried on in this country, the greater number being made in Sweden, and their use is by no means general.

Mather, Cotton.—Born at Boston, Mass., 1663; died there, 1723. A Congregational clergyman, scholar, and author; son of Increase Mather. He was associated with his father in the North Church in Boston in 1684, and remained in that pulpit until his death. He took an active part in the persecutions for witchcraft. His writings include "Magalia Christi Americana," "Wonders of the Invisible World," "Manuductio ad Ministerium," and "Biblia Americana, or Sacred Scriptures of the Old and New Testament, Illustrated."

Mather, Increase.—Born at Dorchester, Mass., 1639; died at Boston, 1723. Youngest son of Richard Mather. He took the degree of M. A. at Harvard in 1656, visited England in 1651, and graduated (M. A.) at Trinity College, Dublin, in 1658. He preached first at Great Torrington, Devonshire, and then in Guernsey. On May 27, 1664, he was ordained minister of the New South Church, Boston. In 1685, he was elected president of Harvard College, resigned in 1701, but retained his Boston pastorate until his death.

Mather, Richard.—Born at Lowton, England, 1596; died at Dorchester, Mass., 1669. A Congregational divine. He was suspended for nonconformity in 1634, went to New England in 1635, and settled at Dorchester where he remained until his death. Among his sons were Samuel, Nathaniel, and Increase Mather.

Mathew, Theobald.—(1790-1856.) An Irish priest of the Roman Catholic Church, known as "Father Mathew," conducted a vigorous crusade in the cause of temperance and social and moral reform.

Mathews, Charles.—(1776-1835.) A prominent English actor of comedy and mimicry. His son CHARLES (1803-1878), attained considerable distinction in the same career.

Matilda.—(1) Queen of William the Conqueror and daughter of Baldwin V. Died in Normandy Nov. 3, 1083. (2) Matilda, or Maud, first wife

- of Henry I. of England, daughter of Malcolm III. of Scotland (1080-1118). (3) Matilda, queen of Stephen, king of England (1103-1152). (4) Matilda Mand, daughter of Henry I., of England and his first wife Matilda. (5) Matilda, countess of Tuscany, ruler of a large part of northern Italy (1046-1115). (6) Matilda, duchess of Saxony, third child of the eldest daughter of Henry II., of England and Eleanor of Aquitaine (1046-1189).
- Matterhorn.**—A mountain peak in the Alps in southern Switzerland. It is 14,836 feet high.
- Matthews, Stanley.**—Born at Cincinnati, O., 1824; died at Washington, D. C., 1889. A lawyer and jurist of note. At the outbreak of the Civil War he entered the Union army as colonel of the 51st Ohio volunteers. In 1881 he was appointed a justice of the Supreme Court of the U. S. in which position he served until his death.
- Maturity.**—Time fixed for payment.
- Mauch Chunk.**—The capital of Carbon Co., Pa., on the Lehigh River. There are important anthracite-coal mines. Pop. (1900), 4,029.
- Mauna Loa.**—The volcano of the Sandwich Islands in the island of Hawaii. It is 13,758 feet above sea-level. It was in a state of activity in 1880 and 1887.
- Maupassant de Henri.**—(1850-1893.) A French novelist.
- Maurepas Lake.**—A lake in eastern La., west of Lake Pontchartrain, with which it communicates.
- Maurice, or Marshal Saxe.**—(1696-1750.) A soldier who fought on behalf of the French and conquered the whole of Belgium.
- Maurice of Saxony.**—(1521-1553.) "Founder of German Protestantism."
- Mauritius.**—A British island in the Indian Ocean, east of Madagascar. It has an area of about 1,000 sq. miles and a population of about 400,000. It was taken from the French in 1810. It is the scene of St. Pierre's story of "Paul and Virginia."
- Maury, Matthew Fontaine.**—(1806-1873.) The author and compiler of charts and tables of astronomy and hydrography.
- Maxim, Sir Hiram S.**—Born, 1831; began life as apprentice to coach-builder; worked in various machine-shops, and began patenting his ideas; invented Maxim gun in which recoil of gun serves as power for reloading; has done much in electricity, and has for some time striven to solve the problem of aerial navigation; director of Vickers, Sons, and Maxim.
- Maximilian.**—(1832-1867.) An emperor of Mexico, and the younger brother of Francis Joseph I. He accepted the crown of Mexico in 1864. He was betrayed by Gen. Lopez—his most trusted friend—at Escobedo in 1867. The Mexican officer who took possession proffered an opportunity for escape which was, however, declined. Maximilian was tried by a court martial which proved a farce. He was shot on July 19, 1867, with Generals Miramon and Mejía.
- Max O'Rell.**—The pen-name of Paul Blouet. A French writer and humorist.
- May, Sir Thomas Erskine.**—(1815-1886.) An eminent English parliamentary authority upon Rules and Procedure. He was made Baron Farnborough in the year of his death.
- Mayer, Brantz.**—Born at Baltimore, 1809; died there, 1879. A lawyer and author. He edited the "Baltimore-American"; was secretary of the U. S. legation in Mexico (1841-42); commissioned colonel in the Federal army. Among his writings are several works on "Mexico," and "Captain Canot," a novel.
- "Mayflower."**—(1) A ship of about 180 tons burden, in which the English Pilgrims sailed from Southampton to Plymouth, Mass., in 1620. (2) A wooden center-board sloop yacht, designed by Edward Burgess, launched May 6, 1886. The dimensions are: length over all, 100 ft.; length, load water-line, 85.7; beam, 23.6; beam, load water-line, 22.3; draught, 10 ft.; displacement, 128 tons. She defended the America's cup against the "Galatea" Sept. 7 and 9, 1886, winning both races.
- May-fly.**—This pretty little relative of the dragon-fly lives only a few hours, or at most, only a day, after he gets his wings. He is seldom seen except in swarms, in which the May-flies are so numerous, that the air is filled with them, as it is some times with snowflakes in winter.
- The head of the May-fly is small and rounded. His large eyes meet on top of his head, and he has small antennæ or feelers. Strange as it may seem, the May-fly has no mouth, or, if he has one, it is very rudimentary. Perhaps the reason for this is, that in his winged state he takes no food and does not need a mouth. His body is very slender, ending in two long and very delicate filaments or tails. The wings of the May-fly are somewhat like those of the dragon-fly, being very thin and delicately veined. The hinder wings are much smaller than the front wings, or are wanting altogether.
- The May-fly lays her eggs in the water, in little balls or clusters, each cluster containing several hundred eggs. These clusters sink to the bottom of the river or pond, the eggs separating and soon hatching into small larvæ.
- The larva of the May-fly lives in the water, under stones or in holes, which he digs in the banks of ponds or streams. These holes or burrows are made below the surface of the water, in soft soil, or if made in the coarse soil, they are lined with fine earth. They have two openings, so that the little creature can go in and come out again, without having to back out, or turn around in his dwelling.
- Though so fragile and short-lived in his winged form, the insect in his larval and pupal states is long-lived, sometimes existing for as many as two or three years. The larva has well-developed jaws, and preys upon other water-insects for his food. He is notable for the number of times he molts or casts his skin, which he sometimes does as often as twenty times.
- When he is ready to change into the winged form, he swims to the top of the water and bursts out of his pupal skin so quickly that he seems

almost to fly out of the water. If you should see him at this time, you would believe him to be a perfect May-fly, but he is really still covered with a very thin and delicate skin, so he flies to the shore and alights upon a plant or tree. Here he casts off the final skin, after which you will notice that his wings are much brighter and his tails are longer. The little insect then flies off to enjoy his short existence, an existence lasting at most only a few hours.

Mayhew, Experience.—Born in Martha's Vineyard, Mass., 1673; died there, 1758. A missionary to the Indians in Martha's Vineyard.

Mayhew, Jonathan.—Born in Martha's Vineyard, Mass., 1720; died at Boston, 1766. A clergyman, controversialist, and advocate of liberalism; son of Experience Mayhew. His writings were edited by A. Bradford (1838).

Maysville.—The capital of Mason Co., Ky., on the Ohio River. It has an important hemp trade. Pop. (1900), 6,423.

Mazarin, Jules.—(1602–1661.) Chief minister of France during the minority of Louis XIV., and cardinal. A great favorite of Richelieu.

Mazepa, Ivan.—(1645–1710.) A page in the household of Casimir of Poland, who for an intrigue was bound naked upon an untamed horse which carried him to Ukraine, where he was rescued by Cossacks. He became a favorite of Peter the Great, who made him a Prince of Ukraine. He made an attempt to overthrow Russia. He died by poison at his own hand. Lord Byron made him the subject of a poem.

Mazzei Letter.—A private letter written by Thomas Jefferson to one Mazzei, an Italian, in 1796. The letter was translated and published in an English paper. It aroused much animosity against Jefferson by its supposed allusion to Washington and others as "Those Samsons in the field and Solomons in the council," who had formed an Anglican, monarchal, aristocratic party in America, whose avowed object was "to draw over us the substance as they had already done the forms, of the British Government."

MAZZINI.—(1805–1872.)

Giuseppe Mazzini, born at Genoa in 1805, was one of the most remarkable men of modern Italy. He was the prophet of Italian unity. He was a grand patriotic soul, the first inspirer and apostle of the Italian Revolution, who for forty years poor, exiled, persecuted, a fugitive heroically steadfast in his principles and in his resolutions. Though often eloquently impetuous, rash and hasty, he was moved by high and noble motives.

Though delicate in his infancy and childhood, he learned to read before he was six years of age—before he was yet able to walk. After studying Latin under a tutor, and reading everything he could find, at the age of thirteen he entered the university, where he studied both anatomy and law and graduated in law. Though his teachers complained that he disregarded some of the "rules," he showed ability and a remarkable generosity in his impulses

and aims. He was noted for the warmth of his friendships and the fixity of his will.

From early youth he possessed sentiments of social equality, and very early he saw the degraded political condition of Italy. He wished for her national unity and deliverance from foreign domination, which it seemed to him could be attained by a return to the republican glories of ancient times.

At the age of eighteen he began the practice of law—devoting the first two years to free pleading for the poor, like all Italian lawyers. He joined the secret society of the Carbonari, for which he never had any admiration, though his influence was felt in its counsels. He also attracted attention by essays in the liberal journals of Florence and Genoa, which were suppressed to prevent the spread of liberal ideas.

Soon after the French Revolution of 1830, he was arrested at night by order of the king of Piedmont and Sardinia, and carried away in a closed carriage, and imprisoned in the fortress of Savona—for being a young thinker of talent, who was fond of solitary walks by night and deep meditations. Six months later, he was liberated on the condition that he would depart from Italy.

Going to France, he settled at Marseilles, where he founded the Association of Young Italy, and published a paper in which he gave his religious and political views. His watchwords were: Liberty, equality, and humanity. He favored education and insurrection as a means of securing a republican union of Italy under one law. He aroused the alarm of the Italian authorities who appealed to Louis Philippe to stifle his voice. Followed from place to place for two years, he finally took refuge in Switzerland, where he organized the first armed attack of the party of Italian unity against the party of the princes, but was defeated.

He found that the Italian people still lacked the constancy of purpose which was necessary to secure freedom; but he determined to persist in spite of adverse fortune. Of the exiles of many lands who were then in Switzerland, he formed a society called "Young Europe" and based upon the principles of liberty and universal suffrage, but in 1837 was soon banished by the Swiss Diet.

In a state of moral solitude, suffering, and doubt, he reached England. Safely passing through his moral crisis, he awoke, tranquil and with new ideas of life. He remained patient, amidst a labor of love among the poor, and managed to live by writing for the reviews. He kept up a constant secret correspondence with friends in Europe, which bore fruit in the insurrection of 1848.

The republican movements throughout the continent of Europe in 1848 inspired the Italian patriots to make another attempt to achieve independence and nationality. Throughout Italy they rose against the rulers and made them grant constitutions. The conflict centered

Mazzini.—*Continued*

in northern Italy. Charles Albert, taking advantage of the embarrassment of Austria, declared war against that country. Failing of success, he resigned his crown in favor of his son Victor Emanuel II.

Meanwhile, Mazzini and Garibaldi were inspiring the patriots of Southern Italy to revolt. After the surrender of Milan to the Austrians, Mazzini went to Switzerland. Finally with Garibaldi, he helped to inspire a revolt that drove out the Pope and made a republic at Rome. He was elected triumvir amidst the rejoicing of the Roman people. He ruled with wisdom and moderation, which elicited a tribute of approbation from Lord Palmerston.

When the republic was overthrown and the Pope reinstated by the troops of the politic Louis Napoleon of the French Republic, Mazzini went to France where he attacked the conduct of Napoleon in letters to De Tocqueville and others.

Though by the autumn of 1849 the Liberals had been crushed and the third Italian Revolution brought to a close and the leaders imprisoned, executed, or sent into exile, they gained much by experience. They knew their strength when united. The extreme Republicans and the moderated Federals were ready to look to the kingdom of Sardinia as the only hope of a nucleus around which to unite the states of Italy.

Mazzini was the leader of the extreme Republicans, the society known as "Young Italy." His hope and faith was that Italy in the near future would be united and self-governed and the hated Austrians driven from Italian soil. There was another party who favored a confederation of the various states. Pope Pius IX. favored this plan, provided Rome should be the center and head of the confederation. A third party favored a constitutional monarchy, with the king of Sardinia as its head, he being the representative of the single royal house in Italy. The leaders, after the failure of the revolution of 1848, finally united on the plan of the third party.

Mazzini, returning to London, encouraged the uprisings in Milan and Piedmont, which were attempted in 1853 and 1857. In 1859 he gave his whole influence to the revolution in Italy. By his foresight he also combatted threatened French predominance, placing no confidence in Napoleon's liberal program. In 1860, he organized the expedition to Sicily of which Garibaldi was the heroic leader.

Though Mazzini, in 1865, was elected by Messini as delegate to the Italian Parliament, he refused to take the oath of allegiance to the monarchy. In 1869, he was again expelled from Switzerland, at the request of the Italian government, for having conspired with Garibaldi. In the next year, he was arrested while on his way for Sicily, and thrown into prison, but was soon released when it appeared that there was no danger of an uprising.

In 1872 while traveling through Europe toward Italy, he died—with his eyes and hands still stretched forth after the ideal which had called to him in his youth—Italian liberty and unity. Kings trembled when they heard that he had suddenly disappeared from London and breathed more freely when they learned that he was in his grave. The Italian Parliament by a unanimous vote, expressed the sorrow of the nation, and the president gave an eloquent eulogy on his patriotic disinterestedness and self-denial in a life spent for the cause of Italy.

What he wrote of Dante can be said of himself: "His indeed was a tragical life—tragical from the real ills that constantly assailed him, from the lonely thought that ate into his soul, because there were none whom he could spire with it. . . . He who bore within himself the soul of Italy was misunderstood by all; but he did not yield; he wrestled nobly with the external world and ended by conquering it."

He did not spend his life in vain, and he made a name that cannot perish.

Wherever he went and whatever he did, he was a power on earth. He was a leader of men, and possessed tact in making friends. He was sincerely patriotic. He was inflexible in his purpose and never discouraged by persecution and defeat. In his private life he was a model of purity and simplicity; in his public life he was unselfish. He loved Italy and her people and all of his virtues bore fruit in raising the youth of Italy to a higher moral tone, and exerting an influence for the regeneration of his country.

"There was no trial he would not endure, no sacrifice, no labor he would not undertake, no danger he would not encounter for the sake of that dream of his youth and pursuit of his manhood, the unity and liberty of Italy." "History has recorded (his) deeds on a tablet which will endure while the annals of Italy are read."

Mazzini derived some of his noblest traits of character from his mother, whom he loved with great devotion. His letters show that he had a kind-hearted nature, with high and noble ideas. Writing to a friend who had lost his mother he said:—

"Nothing here below can take the place of a good mother. In the griefs, in the consolations, which life may still bring to thee, thou wilt never forget her. But thou must recall her, love her, mourn her death, in a manner which is worthy of her. O my friend, hearken to me! Death exists not; it is nothing. It cannot even be understood. . . . Yesterday thou hadst a mother on earth; to-day thou hast an angel elsewhere. All that is good will survive the life of earth with increased power. Hence, also, the love of thy mother. She loves thee, now more than ever. And thou art responsible for thy actions to her, more, even, than before. It depends upon thee, upon thy action, to meet her once more, to see her in another existence. Thou must therefore out of love and reverence for thy mother, grow better and cause her joy

Mazzini.—*Continued*

for thee. Henceforth thou must say to thyself at every act of thine, 'Would my mother approve this?' Her transformation has placed a guardian angel in the world for thee, to whom thou must refer in all thy affairs, in everything that pertains to thee. Be strong and brave, fight against desperate and vulgar grief; have the tranquillity of great suffering in great souls; and that it is what she would have."

McArthur, Duncan.—Born in Dutchess Co., N. Y., 1772; died near Chillicothe, O., 1839. A pioneer in Ohio, general in the War of 1812, and governor of Ohio (1830-32).

McCall, George Archibald.—Born at Philadelphia, Pa., 1802; died at West Chester Pa., 1868. He entered the U. S. army from West Point in 1822, and served in the Florida and Mexican wars. At the beginning of the Civil War he was made a brig.-gen. and served with the Army of the Potomac, commanding, in 1862, that fine body of troops known as the Pennsylvania Reserves. June 30, 1862 he was captured and confined for several months in the famous Libby Prison at Richmond, Va. He resigned from the army in 1863.

McCarthy, Justin, Roxburgh Rd., Westgate-on-Sea, England; born, 1821; former editor of "Morning Star," then leader writer "Daily News"; equally known as historian of our own times, novelist, and politician; from 1890-95 chairman of Irish Nationalists; for 21 years M.P.

McClellan, George Brinton.—Sketch of, 405.

McClernand, John Alexander.—Born in Ky., 1812; died in Ill., 1900. Before the Civil War he was a lawyer and politician of note. In May, 1861, he entered the volunteer service as a brig.-gen., and a year later was made a maj.-gen. He served under Grant at Fort Donelson, Shiloh, and Vicksburg. He commanded the expedition which captured Arkansas Post, with 5,000 prisoners, Jan. 10, 1853. He resigned from the army in 1864.

McClintock, John.—Born at Philadelphia, 1814; died at Madison, N. J., 1870. A clergyman and theologian of the Methodist Episcopal Church, president of Drew Theological Seminary, Madison, N. J. (1867-70). He was chief editor of McClintock and Strong's "Cyclopædia of Biblical, Theological, and Ecclesiastical Literature."

McClintock, Sir Francis Leopold.—Born in Ireland in 1819. A British admiral, famous as an Arctic explorer.

McCloskey, John.—Born at Brooklyn, N. Y., 1810; died at New York, 1885. The first American cardinal. He was president of St. John's College, Fordham, N. Y. (1841-42); appointed bishop *in partibus* in 1844; bishop of Albany (1847-64); became archbishop of N. Y. in 1864; was created cardinal in 1875.

McCook, Alexander McDowell.—Born in Ohio, 1831. An officer of the U. S. army. A graduate from West Point, he was made colonel of the 1st Ohio vols., at the outbreak of the Civil War, and commanded at the battle of Bull Run, July 21, 1861. He was promoted to brig.-gen. soon after-

ward, and to maj.-gen. in 1862. He commanded a division under Buell at Shiloh and later commanded a corps, with which he fought the battle of Perryville, Ky., Oct. 8, 1862. He commanded the right wing of Rosecrans's army at Stone River, and the 20th corps at Chickamauga. After the war he became colonel of the 6th U. S. Inf., and a brig.-gen. in 1890.

McCook, Daniel.—A distinguished member of the "Fighting McCook Family." He entered the U. S. service, in the Civil War, as colonel of the 52d Ohio vols. He commanded a brigade during the Atlantic campaign, and was mortally wounded in the charge at Kennesaw Mountain, June 27, 1864. He died 20 days later. The day before his death he received his commission as a brig.-gen.

McCook, Edward M.—A U. S. volunteer officer of cavalry during the Civil War. He was colonel of the 2d Ind. cav., from which he was promoted to brig.-gen. He served through the war and was a participant in many dashing exploits.

McCook, Robert L.—A U. S. volunteer officer in the Civil War. He entered the service as colonel of the 9th Ohio vols., but was soon afterward promoted to the rank of brig.-gen. While ill, riding in an ambulance, near Decherd, Tenn., Aug. 6, 1862, he was shot and killed by guerrillas.

McCormick, Robert.—Sketch of, 411.

McCosh, James.—Born at Carskeoch, Ayrshire, 1811; died at Princeton, N. J., 1894. A Scottish-American philosopher and educator. He was professor at Belfast, Ireland (1851-68); president of Princeton College, N. J. (1868-88). His works include "Method of Divine Government," "Examination of Mill's Philosophy," "Laws of Discursive Thought," "The Scottish Philosophy," and "Religious Aspects of Evolution."

McCrea, Jane.—Born in N. J., 1754; killed near Fort Edward, N. Y., 1777, by the Indian allies of Burgoyne.

McCulloch, Hugh.—Born at Kennebunk, Me., 1808; died, 1895. A politician. He was Comptroller of the Currency (1863-65) and Secretary of the Treasury (1865-69 and 1884-85). During his first term as secretary, he funded the national debt. "McCulloch," *The*.—One of the vessels of Commodore Dewey's fleet at the battle of Manila, May 1, 1898.

McDonough, Thomas.—Born in New Castle Co., Del., 1783; died at sea, 1825. A naval officer. He defeated the British squadron under Downie on Lake Champlain, Sept. 11, 1814, and was appointed captain that year.

McDougall, Alexander.—Born on the island of Glay, Scotland, 1731; died at New York, 1786. A Revolutionary general. He was defeated at White Plains, 1776; was promoted to maj.-gen. in 1777; was chosen a delegate to the Continental Congress in 1780 and 1784.

McDowell, Edward A.—An American composer; born, 1861. The author of "Hamlet," "Ophelia," "Launcelot," and others.

McDowell, Irvin.—Born at Columbus, O., 1818; died at San Francisco, Cal., 1885. A U. S. soldier.

- He was a graduate from West Point; served in the Mexican War and was brevetted for gallantry at Buena Vista. He was commissioned a brig.-gen. at the beginning of the Civil War and soon afterward became maj.-gen. He commanded the army at Bull Run, July 21, 1861, where he was defeated. Later he commanded a corps in the Army of the Potomac under Gen. McClellan. In 1872 he reached the rank of maj.-gen. in the regular army.
- McDuffie, George.**—Born in Columbia (now Warren) Co., Ga., 1788; died in Sumter district, S. C., 1851. A statesman and orator, a prominent supporter of nullification. He was a member of Congress from S. C. (1821-34); governor of S. C. (1834-36); and U. S. senator (1843-46).
- McEntee, Jervis.**—Born at Roundout, N. Y., 1828; died there, 1891. A painter of landscapes and figures. He is especially noted for his autumn and winter scenes. He was elected a member of the National Academy in 1861.
- McGee, Thomas D'Arcy.**—(1825-1868.) An Irish journalist in Great Britain, U. S., and Canada. He was shot as he was leaving the House of Commons, Ottawa, by Patrick Whelan.
- McGillivray, Alexander.**—Born in Ala., about 1740; died at Pensacola, Fla., 1793. A chief of the Creek Indians.
- McGlynn, Rev Edward, D.D.**—A popular, eminent Roman Catholic priest and orator of Irish parentage; born, 1837. An earnest advocate of Henry George's doctrines, which brought him into disfavor, with ecclesiastical superiors; but he was reinstated in 1893.
- McIlvaine, Charles Pettit.**—Born at Burlington, N. J., 1799; died at Florence, Italy, 1843. A bishop and theologian of the Protestant Episcopal Church. He was bishop of Ohio (1832-73). His best-known work is "Evidences of Christianity."
- McKean, Thomas.**—Born at New London, Pa., 1734; died at Philadelphia, 1817. A politician and jurist. He was a member of Congress from Del. (1774-83); signed the Declaration of Independence in 1776; was chief-justice of Pa. (1777-99), and governor of Pa. (1799-1808).
- McKeesport.**—A borough in Allegheny Co., Pa., on the Monongahela. Pop. (1900), 34,277.
- McKinley, William.**—Sketch of, 414.
- McKinley, William, Assassination of.**—In August, 1901, McKinley was President of the U. S., in the full flush of health and robust manhood, and at the zenith of a long, useful and brilliant public career. On the 6th of Sept. following, the baleful tidings of his assassination, at Buffalo, N. Y., caused throughout the U. S. a paroxysm of inexpressible grief and horror; the whole world was shocked by the atrocious and causeless crime. President McKinley had accepted an invitation to visit the Pan-American Exposition at Buffalo, and was accompanied by his wife, several members of his Cabinet, and other official and personal friends. On the previous day, in the Temple of Music, to a vast audience, he had delivered an address that was characteristic of the man in its sentiments of lofty patriotism, and the expression of his earnest desire to promote in the largest measure the welfare of the nation and the continued prosperity and happiness of its people. The address was received with loud acclaim and aroused the multitude of listeners to a climax of enthusiasm and cordial good feeling. It was an occasion to quicken the pulse of every true American and to cause his heart to swell with pride and love of country. The next day, returning from a short trip to Niagara Falls, the President acceded to the wish of the people and held a reception in the Temple, and thousands of people, passing in single file, took him by the hand. A man approached having one hand wrapped in a white cloth and held at his breast. This caused no remark, for the natural presumption was that he was suffering from an injury, and the President gave him a look of sympathy as he greeted him in turn. Concealed by the covering, the dastard held in his hand a loaded revolver, with his finger on the trigger. Giving his other hand to the President, a token of friendship, at the same time he fired two shots in quick succession. It was done in an instant, before the amazed and horror-stricken bystanders could realize the murderous design. Then the assassin was overpowered and hurried away by officers to escape the fury of the people. Placing his hand to his breast, the President sank into the arms that were outstretched to receive him. A hasty examination showed that one bullet had struck the breastbone and had not passed into the body; the other had entered the body at a lower point and penetrated the stomach. The distinguished sufferer was removed to the home of John G. Milburn, president of the Exposition company, where he received every care and attention possible for loving hands and surgical skill to bestow. Meanwhile the tidings of the assassination were flashed to all parts of the country, and of the civilized world, evoking everywhere expressions of sorrow and sympathy without precedent. Telegrams by thousands gave utterance to the intensity of feeling that stirred the emotions, not only of the American people, of every class, creed, and condition, but of both rulers and people in all foreign countries. For six days the patient seemed to improve, and the character of the bulletins issued at stated periods each day by the attending surgeons was such as to justify the belief that he would recover. Such was the belief until Friday, Sept. 13, one week after the shooting. On that day the President had an unlooked-for relapse. He sank rapidly and his condition became alarming. Before night the doctors expressed the opinion that death was inevitable. He died at 2:15 o'clock, on the following morning, Sept. 14. He was conscious until near the end, and his last words, spoken to those about his bed were: "Goodby, all, goodbye! It is God's way; His will be done!" The body was taken to Washington, where the state funeral was held in the rotunda of the Capitol. Thence the

- remains were removed to the family home in Canton, Ohio, for interment. Mr. McKinley was in the 59th year of his age.
- McLane, Louis.**—Born at Smyrna, Del., 1786; died at Baltimore, 1857. A politician. He was U. S. senator from Del. (1827-29); U. S. minister to Great Britain (1829-31); secretary of the treasury (1831-33); and secretary of state (1833-34).
- McLane, Robert Milligan.**—Born at Wilmington, Del., 1815; died at Paris, 1898. A diplomatist, son of Louis McLane. He was member of Congress from Md. (1847-51); U. S. minister to China (1853-55), to Mexico (1859-60), and to France (1885-88).
- McLaws, Lafayette.**—Born in Augusta, Ga., 1821; died at Savannah, Ga., 1897. He was a noted soldier in the Confederate army during the Civil War. He was a maj.-gen. and commanded a division under Gen. Robert E. Lee, participating with conspicuous zeal and capacity in all the campaigns of the army.
- McLean, John.**—Born in Morris Co., N. J., 1785; died at Cincinnati, 1861. A jurist and politician. He was member of Congress from O. (1813-16); postmaster-general (1823-29); associate justice of the U. S. Supreme Court (1829-61); and unsuccessful candidate for the Republican nomination for President in 1856 and 1860.
- McLeod, Alexander.**—Born in Mull, Scotland, 1774; died at New York, 1833. A clergyman of the Reformed Presbyterian Church and a religious writer. He was pastor of the First Reformed Presbyterian Church of N. Y. (1801-33).
- McLeod, Xavier Donald.**—Born at New York, 1821; killed near Cincinnati, 1865. A poet and miscellaneous writer, son of Alexander McLeod.
- McLeod Case.**—In 1840 Alexander McLeod, a Canadian sojourning in N. Y., boasted that he took part in the seizure of the steamer "Caroline," during a rebellion in Canada a few years previously. (See "CAROLINE," THE.) He was arrested in Lockport, N. Y., and indicted for murder. The British minister demanded his release on the ground that McLeod had acted under orders and that the N. Y. State courts had no jurisdiction in a case that lay only between the British and U. S. governments. The Federal Government admitted the justice of this, but held that McLeod could be released only by process of law. The attorney-general instituted habeas corpus proceedings, but the court held that there was no ground for releasing him. McLeod finally proved an alibi and was acquitted.
- McNeil, John.**—Born at Hillsborough, N. H., 1784; died at Washington, D. C., 1850. An officer distinguished in the battles of Chippewa and Lundy's Lane, 1814.
- McPherson, James Birdseye.**—Born at Clyde, O., 1828; killed in battle of Atlanta, Ga., July 22, 1864. He was a graduate of West Point, where he ranked high in scholarship, and entered the corps of engineers. Early in the Civil War he was made a brig.-gen., and in 1862 was chief-engineer of the army of Gen. Grant. He showed such capacity that he was soon promoted to maj.-gen. and assigned to the command of a corps. He was conspicuous in the operations around Vicksburg and elsewhere. In 1864 he succeeded to the command of the Army of the Tennessee, which formed a part of the great army organized by Gen. Sherman for the Atlanta campaign. In May, McPherson was sent to flank the Confederate army's position at Dalton, Ga., by passing through Snake Creek Gap and striking the railroad at Resaca. He accomplished this, and thus forced the retreat of Johnston to that place. On the 22d of July the Army of the Tennessee, which occupied the left of Sherman's line at Atlanta, was furiously assailed by half of Hood's army, under Gen. Hardee. Early in the action McPherson, while rapidly passing through a copse, encountered the enemy. He was shot from his horse and died almost immediately. He was a most able and distinguished officer, and Gen. Sherman was overcome with emotion when he learned of his death. Gen. McPherson was soon to have been married. His body was buried at the home of his mother in Clyde, where a beautiful monument marks his resting place.
- Mead, Larkin Goldsmith.**—Born at Chesterfield, N. H., 1835. A well-known sculptor. He went to Florence in 1862, where he resides. Among his works are a colossal statue of "Vermont"; "Ethan Allen," at Montpelier, Vt.; "Lincoln," at Springfield, Ill., and "Ethan Allen," at Washington.
- Meade, George Gordon.**—Sketch of, 423.
- Meade, Richard Kidder.**—Born in Nausemond Co., Va., 1746; died in Frederick Co., Va., 1805. A Revolutionary officer.
- Meadow Sweet, The.**—2901.
- Meanness, a Fault in Children.**—893.
- Measles.**—1109.

MEASURES.—

FOR BRICK WORK, see under BRICK.

STONE is measured by the cord. To find the contents of a pile of stone, multiply by the length, breadth, and thickness, in feet, and divide the product by 128. The result will be the number of cords.

BOARD MEASURE.—1. For boards not more than one inch thick, multiply the length in feet by the width in inches, and divide the product by 12.

2. For boards more than one inch thick, multiply the length in feet by the width and thickness in inches.

3. To find the width of a tapering board, measure it at the center, or take one-half the sum of the widths at the two ends.

LATH WORK, see under LATH.

WALL PAPER is sold by the roll, which is 18 inches wide. Single rolls are 24 feet long and double rolls 48 feet. Part of a roll is counted the same as a whole roll. The area of the walls is measured in feet, making deductions for openings. It is necessary to find the number of rolls actually used in order to ascertain the cost of papering.

Measures.—Continued

PAINTING is estimated by the square yard. Double measure is usually allowed for carved moldings.

KALSOMINING is measured like painting, by the square yard.

GLAZING is done at so much per light, according to size.

SHINGLING.—The average width of shingles is four inches. They are packed in bunches of 250 each. Four bunches, or 1,000 shingles, will lay 100 square feet of surface, allowing four inches to the weather. This is called a square of shingles. They require four-penny nails.

LINEAR MEASURE

12 Inches (in.)=1 Foot.....ft.
 3 Feet=1 Yard.....yd.
 5½ Yards, or } =1 Rod.....rd.
 16½ Feet }
 320 Rods, or }
 1760 yds., or } =1 Mile.....mi.
 5280 ft. }

SURVEYORS' LINEAR MEASURE

7.92 Inches=1 Link.....l.
 25 Links=1 Rod.....rd.
 4 Rods=1 Chain.....ch.
 80 Chains, or }
 320 rds., or } =1 Mile.....mi.
 8000 l. }

In the sale of goods, the linear yard is divided into halves, quarters, and eighths; in estimating duties in the Custom House, it is divided into tenths and hundredths.

MARINERS' LINEAR MEASURE

9 Inches=1 Span.....sp.
 8 Spans, or 6 ft.=1 Fathom.....fath.
 120 Fathoms=1 Cable's Length.....c. l.
 7½ C. Lengths, or }
 880 fath., or } =1 Common mile.
 5280 ft. }

Note.—The Nautical or Geographical mile, or Knot, is 6086.7 ft., or about 1.15½ common or statute miles.

SQUARE MEASURE

144 sq Inches=1 Sq. Foot.....sq. ft.
 9 sq. Feet=1 Sq. Yard.....sq. yd.
 30¼ sq Yards=1 Sq. Rod.....sq. rd.
 160 sq Rods=1 Acre.....A.
 640 Acres=1 Sq. Mile.....sq. mi.

SURVEYORS' SQUARE MEASURE

625 Links=1 Pole.....P.
 16 Poles=1 sq. Chain.....sq. ch.
 10 Sq. Chains=1 Acre.....A.
 640 Acres=1 sq. mile.....sq. mi.
 36 Sq Miles=1 Township.....Tp.

U. S. PUBLIC LANDS.

1 Township = 6 mi. × 6 mi.=36 sq. mi.=23,040 A.
 1 Section = 1 " × 1 " = 1 " " = 640 "
 1 Half-Sec. = 1 " × ½ " = ½ " " = 320 "
 1 Quarter-Sec.=½ " × ½ " =¼ " " = 160 "

Note.—Nearly all the land west of the Alleghany Mountains and north of the Ohio River,

and the land west of the Mississippi River, has been surveyed and platted by the U. S. government. The method of survey was to run lines north and south parallel with some established meridians, called principal meridians; these lines were crossed at right angles so as to form townships of six miles square.

CUBIC OR SOLID MEASURE.

1728 Cubic Inches (cu. in.)=1 Cubic Foot, cu. ft.
 27 Cubic Feet =1 Cubic Yard, cu. yd.
 16 Cubic Feet =1 Cord Foot, cd. ft.
 8 Cord Feet }
 128 Cubic Feet } =1 Cord, Cd.

Note.—A pile of wood 4 feet wide, 4 feet high, and 8 feet long contains 1 cord; and a cord foot is 1 foot in length of such a pile.

MEASURES OF ROCK, EARTH, ETC.

25 cubic feet of sand=1 ton.
 18 cubic feet of earth=1 ton.
 17 cubic feet of clay=1 ton.
 13 cubic feet of quartz, unbroken in lode=1 ton.
 18 cubic feet of gravel or earth, before digging, =27 cubic feet when dug.
 20 cubic feet of quartz broken (of ordinary fineness coming from the hole)=1 ton contract measurement.

CIRCULAR OR ANGULAR MEASURE.

60 Seconds (")=1 Minute.....'
 60 Minutes =1 Degree.....°.
 360 Degrees =1 Circumference, C.

Note.—The Standard unit of the Circular Measure is the degree. Circular or angular measure is used in measuring angles, also in determining latitude and longitude.

A Quadrant is one-fourth of a circle, or 90°.
 A Sextant is one-sixth of a circle, or 60°.

LIQUID MEASURES.

4 Gills (gi.)=1 Pint, pt.
 2 Pints =1 Quart, qt.
 4 Quarts =1 Gallon, gal.

In estimating the capacity of cisterns, reservoirs, etc.:

31½ Gal.=1 Barrel, bbl.
 63 Gal.=1 Hogshead, hhd.
 or, 1 Hhd.=2 bbl.=63 gal.=252 qt.=504 p.

Note.—The barrel and hogshead are not fixed measures, but vary when used for commercial purposes. The capacity of these is found by actual measurement.

APOTHECARIES' FLUID MEASURE.

60 Minims (m)=1 Fluid drachm, f ʒ.
 8 Fluid drachms=1 Fluid ounce, f ʒ.
 16 Fluid ounces =1 Pint..... O.
 8 Pints =1 Gallon.... Cong.

Note.—Cong. stands for the Latin *Congius*, a gallon; and O. for *Oclavus*, one-eighth, a pint being one-eighth of a gallon.

A common teaspoon holds about one fluid drachm. In this measure the symbols precede the numbers to which they refer.

Measures.—Continued

APOTHECARIES' WEIGHT.

- 20 Grains (gr. xx)=1 Scruple, ℥.
- 3 Scruples (℥ iij)=1 Dram, ℥.
- 8 Drams (℥ viij)=1 Ounce, ℥.
- 12 Ounces (℥ xij)=1 Pound, lb.

Note.—Medicines are bought in quantities by Avoirdupois weight; thus, curiously, being bought by one measure and sold by another.

DRY MEASURE.

- 2 Pints (pt.)=1 Quart, qt.
- 8 Quarts =1 Peck, pk.
- 4 Pecks =1 Bushel, bu.

TROY WEIGHT.

- 24 Grains (gr.) =1 Pennyweight, pwt.
- 20 Pennyweights=1 Ounce..... oz.
- 12 Ounces =1 Pound..... lb.

DIAMOND WEIGHT.

- 16 Parts =1 Carat Grain.
- 4 Carat Gr.=1 Carat.
- 1 Carat =3½ Troy gr., nearly.

ASSAYERS' WEIGHT.

- 1 Carat =10 pwt.
- 1 Carat Gr.=60 Troy gr.
- 24 Carats = 1 Troy lb

Note.—In weighing diamonds and other gems, the unit generally employed is the Carat. The term Carat is also used to express the fineness of gold. 24 Carat is pure gold, 18 Carat is ¾ pure gold, etc.

AVOIRDUPOIS WEIGHT.

- 16 Ounces (oz.)=1 Pound.....lb.
- 100 Pounds=1 Hundredweight.....cwt.
- 20 Hundredweight, or } =1 TonT.
- 2000 Pounds

NOTE.—The Long Ton=2,240 lbs. It is used in weighing some coarser articles, as iron and coal at the mines; also goods on which duties are paid at the U. S. Custom House.

Following are some approximate measures:
45 drops of water, or a common teaspoonful =1 fluid drachm.

- A common tablespoonful=½ fluid ounce.
- A small teacupful, or 1 gill=4 fluid ounces.
- A pint of pure water=1 pound.
- 4 tablespoonfuls, or a wine glass=½ gill.
- A common-sized tumbler=½ pint.
- Four teaspoonfuls=1 tablespoonful.

APPROXIMATE SPEED.

- A man walks.....3 miles per hour.
- A horse trots.....7 " " "
- A horse runs.....20 " " "
- A steamboat sails.....18 " " "
- A sailing vessel sails.....10 " " "
- Slow rivers flow.....3 " " "
- Rapid rivers flow.....7 " " "
- A moderate wind blows..7 " " "
- A storm moves.....36 " " "
- A hurricane moves.....80 " " "

- A rifle ball moves 1,466 feet per second.
- Sound moves 1,141 feet per second.
- Light moves 192,000 miles per second.
- Electricity moves 288,000 miles per second.

USED BY STATIONERS AND THE PAPER TRADE

- 24 Sheets = 1 Quire, qr.
- 20 Quires = 1 Ream, rm.
- 480 Sheets = 1 Ream.
- 2 Reams = 1 Bundle, bun.
- 5 Bundles = 1 Bale, B.

IN COUNTING CERTAIN ARTICLES

the following is used:—

- 12 Units = 1 Dozen, doz.
- 12 Dozen = 1 Gross, gro.
- 12 Gross = 1 Great Gross, G. gro.
- 20 Units = 1 Score, sc.

A BOOK FORMED OF SHEETS FOLDED

		[(pages)
In 2 leaves is called a Folio		and makes 4 pp.
In 4 " " " Quarto, 4to.		" 8 pp.
In 8 " " " Octavo, 8vo.		" 16 pp.
In 12 " " " Duodecimo, 12 mo.		" 24 pp.
In 16 " " " 16 mo.		" 32 pp.
In 18 " " " 18 mo.		" 36 pp.
In 24 " " " 24 mo.		" 48 pp.

Mecca.—The sacred city of the Mohammedans; capital of Arabia; the birthplace of Mohammed.

Mechanic, The Education of the.—5154.

Mechanical Engineering as a Profession.—5101.

Mechanicsville.—A place in Va., 7 miles north by east of Richmond. Here, June 26, 1862, a part of Lee's army under Longstreet and A. P. Hill was defeated, by a part of McClellan's army under Fitz John Porter. This is also called the battle of Beaver Dam Creek, and formed part of the Seven Days' Battles.

Mechanicsville (Va.), Battle of.—One of the engagements of the Seven Days' Battles near Richmond. Gen. Lee massed the Confederate troops of A. P. Hill, Longstreet, D. H. Hill, and Jackson, and at dawn of June 26, 1862, hurled them upon the Union right, held by the corps of Fitz John Porter. After a stubborn fight, the Confederates were repulsed, though Porter subsequently retired across the Chickahominy. The Confederate loss was about 1,500; that of the Federals 650.

Mecklenburg Declaration.—A series of resolutions purporting to have been adopted by the citizens of Mecklenburg Co., N. C., May 20, 1775, declaring their independence of Great Britain, followed by a second series of resolutions adopted May 31, providing for a local government. The independence resolutions were first published in 1819 and created much discussion as to their genuineness. They contained several phrases almost or quite identical with portions of the Declaration of Independence, adopted at Philadelphia July 4, 1776. Thomas Jefferson immediately declared them fraudulent. It was admitted that the original Mecklenburg resolutions were burned in 1800, and that those published in 1819, were reproduced from memory

- by a son of the secretary of the meeting. The N. C. legislature investigated the matter, and secured enough evidence to justify it in making May 20 a state holiday.
- "**Medea.**"—A tragedy by Euripides written about 431 B.C.
- Medford.**—A city in Middlesex Co., Mass., on the Mystic River; the seat of Tufts College (Universalist). Pop. (1900), 18,244.
- Medical Practitioner, The General.**—4962.
- Medici.**—An Italian family for a long period in power over Florence and Tuscany. It produced many eminent statesmen, and its members were patrons of the fine arts. The last representative in power was Giovan Gastone de Medici, who died in 1737.
- Medicine Bow Mountains.**—A chain of the Rocky Mountains in northern Col. and southern Wyo.
- Mediterranean Sea.**—A large midland sea, bordered by the continents of Europe, Asia, and Africa, and connected with the Atlantic Ocean by the Strait of Gibraltar. Its shores have been the scenes of many civilizations, particularly those of Egypt, Greece, and Rome.
- Medusa.**—One of the Gorgons of Greek mythology. Her hair had been changed to serpents, and everyone who looked on her was turned into stone. She was beheaded by Perseus, who attacked her with averted face, guiding his movements by the reflection in his polished shield. She has been a favorite subject with sculptors.
- Meek, Fielding Bradford.**—Born in Iowa, 1817; died at Washington, D. C., 1876. A geologist and paleontologist.
- Meiggs, Henry.**—Born in Catskill, N. Y., 1811; died in Lima, Peru, 1877. He was a lumber merchant in San Francisco, but failed in 1854, and went to South America. He engaged in railway construction in Chile, and after 1867 in Peru. His greatest public work there was the Oroya railroad over the Andes.
- Meigs, Fort.**—A fort at the Mamsee rapids, in northwestern Ohio, held by the Americans under Harrison against the British and Indians, May and July, 1813.
- Meigs, Montgomery Cunningham.**—Born at Augusta, Ga., 1816; died at Washington, D. C., 1892. A distinguished engineer and general of the U. S. army. Although of southern birth and family connections, he adhered to the Union in the Civil War, and in 1861 was made quartermaster-general of the army, which position he filled with marked efficiency. He was brevetted major in 1864. He supervised the erection of several of the government buildings in Washington. He was placed on the retired list in 1882.
- Meigs, Return Jonathan.**—Born at Middletown, Conn., 1734; died at the Cherokee agency, 1823. A Revolutionary officer.
- Meigs, Return Jonathan.**—Born at Middletown, Conn., 1765; died at Marietta, Ohio, 1825. A politician and jurist, son of R. J. Meigs.
- Meissonier, Jean Louis Ernest.**—A celebrated French painter, 3460.
- Melbourne.**—The largest city of Australia, capital of Victoria, and one of the chief seaports of the Southern Hemisphere. Exports principally gold, wool, and hides. Pop., 490,896.
- Melenite.**—An explosive discovered in 1886-87; it has a destructive power 100 times greater than that of the ordinary gunpowder, and ten times that of nitroglycerine.
- Melio, Custodio José de.**—A naval officer of Brazil, born in 1845. He headed a movement for revolution which was not successful.
- Melos, or Milo.**—A volcanic island of the Cyclades, Greece; the statue of "Venus of Melos" was found here in the ruins of the city of Melos.
- Melville, Herman.**—Born at New York, 1819; died there, 1891. A novelist. From 1857 to 1860 he lectured in the U. S. and traveled in England and on the Continent. He was a district officer in the N. Y. customhouse (1866-85). His works include "Typee," "Omoo," "Moby Dick, or the White Whale," and "Pierre, or the Ambiguities."
- Memling, Hans.**—3482.
- Memorial Day.**—See DECORATION DAY.
- Memory, Cultivation of.**—3093.
- Memphis.**—The ancient capital of Egypt, supposedly built by Menes.
- Memphis.**—The capital of Shelby Co., Tenn., on the Mississippi River. It has lumber manufactures; is one of the chief cotton markets of the U. S., and has important river commerce. The Mississippi is crossed here by the only bridge that spans it below St. Louis. Pop. (1900), 102,320.
- Memphis (Tenn.), Capture of.**—The evacuation of Corinth, Miss., by the Confederates, May 31, 1862, uncovered Fort Pillow, a strong Confederate work on the Mississippi River, 40 miles above Memphis, and it was abandoned to the Federals. June 6 Commodore Davis, with a Union fleet of five gunboats and two rams appeared before Memphis. A Confederate fleet of eight vessels, under Commodore Montgomery, gave battle, but was defeated and nearly destroyed, after a sharp conflict of little more than an hour. There was no land force at Memphis sufficient for its defense and the city was immediately surrendered to the Federals. It did not again pass under the flag of the Confederacy during the war.
- Memphremagog Lake.**—A lake on the border of Vt., and the province of Quebec, Can. It discharges into the St. Lawrence by the rivers Magog and St. Francis.

MENDELSSOHN

BACH, Händel, Haydn, Mozart, and Beethoven, are universally accorded the highest place on the composers' roll of honor. It has been said that if a sixth name were to be added to the list, it would be that of Mendelssohn. As to whether he is justly entitled to this exalted rank, critical opinion has undergone repeated changes. There was a time when, especially in England, Mendelssohn was unhesitatingly classed with these greatest of composers; later, a reaction took place and he was as much depreciated as he had formerly been extolled. Of recent years, a second reaction has set in, which has secured for his work a fairer, and a more dispassionate, judgment than it has ever received before. The final decision seems to be that he ranks very near but not among these five great names. He may be called a Tennyson, but not a Shakespeare, of musical art.

Mendelssohn was, of all the composers, the most favored by fortune. Born, and reared, in wealth, he never knew the poverty and the privation that was at one time or another the hard lot of all his predecessors. His family was highly cultured, and he grew up in an intellectual and an artistic atmosphere, such as Mozart, in a lesser degree, enjoyed, but which Beethoven so sadly missed. His mother was a superior woman, an accomplished musician, and linguist, and his father an intellectual man of great practical judgment. They realized the inestimable advantage, in any profession, of a broad culture, and insisted that the boy should acquire a sound general education, before he should devote himself to any one art. When the bent of his talent became unmistakably apparent, he received every advantage which money could procure to prepare him for that work for which he was so richly endowed by nature. Mendelssohn was, moreover, blessed with great grace, and charm, of manner, with a handsome face, and figure, and a genial, sunny disposition which won for him a host of friends. To crown all, he possessed a balance of character, fair-mindedness, unprejudiced judgment, and common sense, which are rare in a man of genius, and which saved him from the ill effects that so often accompany riches and success.

Felix Mendelssohn-Bartholdy was born in Hamburg, February 3, 1809. He was the grandson of a German Jew, Moses Mendelssohn, a distinguished scholar and philosopher. The composer's father, Abraham Mendelssohn, who was a wealthy banker, accepted Christianity under the influence of his wife's family, and assumed their name, Bartholdy. Hence the composer's double name, though he is generally known as Mendelssohn.

Felix was a musical prodigy, like Mozart. He was one of four musically gifted children, and, as in the case of "Nannerl" and Wolfgang Mozart, his mother discovered in the course of her music lessons to the talented Fanny, that her brother was even more richly endowed than she.

When Felix was two years old, Hamburg fell into the hands of the French, and the Mendelssohn family fled to Berlin, where its members thenceforth resided, and where their home became the meeting place of the most eminent musical, literary, and scientific Germans of the day. The children formed the center of a group of musicians who met on Sunday mornings in the Mendelssohn drawing-room, to play over Felix's compositions, for Mendelssohn, like Mozart, began composing at a very early age. Felix, standing upon a stool, so that his small person might be seen, was conductor of this orchestra. Fanny presided at the piano, Paul played the violoncello, and Rebekah sang.

Mendelssohn was soon placed under the best instructors of the pianoforte, and of composition, and in both branches he made surprisingly rapid progress. In addition

to the keenest intellect, and the command of a marvelous memory, he possessed a facility of finger, which made all the combinations of keyed instruments easy to him. His parents, however, in spite of their pride in his wonderful talent for music, took care that he should acquire a liberal education, which included the classics, the modern languages, mathematics, and metaphysics, supplemented by extensive travel.

Mendelssohn first performed in public at the age of eight, when he played Dussek's *Military* concerto. At twelve, his master in composition, Zelter, took him to Weimar to visit Goethe, to whom the young composer at once dedicated three pianoforte quartets, which he had just written, and which were his first published works. From this time dates, in spite of their disparity in years, a warm friendship and mutual admiration between the great poet and the great musician.

At the age of fifteen, the lad for a time received instruction from the composer Moscheles, who said in speaking of his lessons to Felix: "I never lost sight of the fact that I was sitting next to a master, not a pupil." The two became, and always remained, fast friends.

It seemed that the elder Mendelssohn was not yet satisfied to have his son devote himself to music as a profession. He, therefore, took him to Paris, in 1825, to obtain the judgment of Cherubini upon the boy's musical abilities, and finding the venerable composer's opinion the same as that voiced by the professors at Berlin, he had no further doubt as to Felix's true vocation. The same year, Mendelssohn's first and only published opera, *Camacho's Wedding*, was performed in Berlin. The work was well received by the audience, but was so harshly treated by the critics, that from that time the composer entertained a prejudice against Berlin, and an aversion to writing for the stage.

When Felix was sixteen years old, his father purchased a large mansion containing apartments well suited to musical gatherings, and surrounded by a seven-acre park, wherein was a "garden house" capable of seating several hundred persons. In this garden house, especially in summer, the "Mendelssohn Matinée" were held, and their fame spread abroad until it became an honor, eagerly sought, to be invited to them. The orchestra was extended to include the foremost musicians in Berlin, and among the guests, were many of the most distinguished persons in Europe. The artist Hensel, who afterward married Fanny Mendelssohn, was accustomed to paint the portraits of the celebrities who were guests of the house. The result was several hundred faithful likenesses of famous men and women, including Weber, Paganini, Liszt, Gounod, Ver-net, Kaulbach, Thorwaldsen, Rachel, Goethe, Heine, Humboldt, Hegel, Bunsen, and many others. Few musicians have enjoyed such social advantages as did Mendelssohn.

When Mendelssohn reached the age of eighteen, he had already composed three celebrated works, which are full of exquisite poetry and grace, and which contain touches of genius that gave promise of a richer maturity. These works were the *Overture to a Midsummer Night's Dream*, *The Calm of the Sea and a Prosperous Voyage*, and the *Octet in E Flat*.

The next two years were spent at the University of Berlin, where, as a diversion from a severe course of study, he wrote a metrical version, in German, of Terence's *Andria*, which shows another side of his artistic temperament.

Mendelssohn had early received a thorough training in the works of Bach, and had always entertained a profound appreciation, and admiration, for the old master. A choir had been formed to meet at his house to practise these works, and in 1829, a great public performance of the *St. Matthew Passion* was given under the young musician's baton.

In 1829, Mendelssohn visited England, where, although the trip was not intended as a professional tour, he appeared in public a number of times "with success," as he

wrote, "beyond anything I could have dreamed." A journey through Scotland resulted in the *Scottish Symphony*, composed in 1843, of which the *scherzo* is the most characteristically Scotch music ever written by a German, and the *Hebrides Overture*, in which the composer recorded the impressions produced upon him by the wild scenery of the islands of northwestern Scotland.

Toward the close of 1830, Mendelssohn started upon a tour of Italy, Switzerland, and France, including a prolonged stay in Rome. His letters, written at this time, which have been published, furnish a delightful account of his journey. They are like the man—scholarly, sparkling, and charming. Another talent which afforded him much pleasure on his journeys, was that for drawing, and his letters contain many sketches of artistic merit, of scenes that impressed his fancy.

Mendelssohn's sojourn in Italy was one of the happiest times of his singularly happy and sunny life. It was afterward commemorated, in 1833, by the *Italian Symphony*, one of his finest works. His musical version of Goethe's ballad, *Walpurgis Night*, was written during this stay.

Of the glories of Switzerland, by which his artistic nature was profoundly stirred, he wrote: "I thank God for having created so much that is beautiful." While at Paris, he was greatly shocked by the death of his aged friend Goethe, and was himself brought near to death by the epidemic of cholera, which visited the city.

Mendelssohn next proceeded to London, where he received an enthusiastic welcome, such as few foreign artists have been accorded in England. Returning to Germany with commissions for three new works, which resulted in the *Trumpet Overture*, the *Italian Symphony*, before mentioned, and the aria *Infelice*, he made, at the urgent desire of his friends, an attempt to obtain the directorship of the vocal academy at Berlin. It was unsuccessful, and served only to deepen his resentment against his home city. It was the greatest defect of his fine character that, accustomed as he was to appreciation and success, he would not brook opposition and disappointment. Partly on account of this intolerance of contradiction, and partly on account of the jealousies and the intrigues of other musicians, arose the dissensions which led him to resign, after a short time, the post of director of the singing academy at Düsseldorf, which he had accepted in 1833.

In 1835, the composer was appointed conductor of the celebrated *Gewandhaus* Concerts of Leipzig, and removed to that city, which was thenceforth closely associated with his name and his achievements. The same year came to him one of the few afflictions of his life, the death of his father.

The following year, the composer, then twenty-seven, produced at a music festival at Düsseldorf his great oratorio, *St. Paul*, which was at once appreciated, as it deserved.

Mendelssohn at the age of twenty-eight, married Cecilia Jean-Renaud, of Frankfort, a "beautiful, gentle, and sensible" woman, charming and unassuming, and to their singularly happy, and congenial, domestic life, many of their friends have left testimony.

In 1840, Mendelssohn was commissioned to compose a work commemorating the fourth centennial of the invention of printing, in celebration of which a statue of Gutenberg was to be unveiled at Leipzig. The result was his noble *Hymn of Praise*, which like Beethoven's *Choral Symphony*, combines orchestral and choral parts. As was his custom with all of his works, he afterward revised and rewrote it, adding the famous passage, *Watchman, will the night soon pass?* The king of Saxony commanded the repetition of the *Hymn of Praise*, personally thanked the composer, and appointed him court chapel-master, while the University of Leipzig conferred upon him the degree of Doctor of Philosophy. The king of Prussia, in recognition of the composer's genius, bestowed

upon him the Order of Merit, and in 1841, created for him the post of "General Superintendent of Sacred Music throughout the Kingdom," and director of concerts in Berlin, which Mendelssohn accepted on condition that he should still conduct the concerts at Leipzig.

About this time, overwork brought on an illness, his recovery from which was celebrated by the composition of the *Scotch Symphony*, before mentioned.

The year 1843, when the composer was thirty-four, saw the crowning of his efforts to bring about an appreciation of Bach, in the erection at Leipzig of a statue to his memory. With disinterested public spirit and devotion to his art, Mendelssohn, aided by the king of Saxony, secured in the same year, the establishment of the great musical conservatory of Leipzig. He took a most active part in the work of the academy, not only as a director, but in instructing the classes, and gave freely of his time, his strength, his experience, and his genius, for the welfare of the institution.

At the suggestion of his royal patron, the king of Prussia, Mendelssohn remodeled and elaborated his *Midsummer Night's Dream*, making it the music of the entire drama, wrote the music for the *Antigone* of Sophocles and the *Ædipus Coloneus*, the overture to Victor Hugo's *Ruy Blas*, and the overture and musical setting of Racine's *Athalie*. His next step was the editing of Händel's *Israel in Egypt*, with the worthy determination of clearing the original score from the changes, and interpolations, of directors, and performers.

After another trip to England, Mendelssohn, in 1845, deciding to retire to private life, in order to devote himself to composition, resigned his office of Music Director at Berlin. He was engaged to write an oratorio for the festival at Birmingham. Suddenly, in the midst of this work, he resumed the directorship of the Leipzig concerts, and conducted a series of festivals at Liège, Aix-la-Chapelle, and Cologne. He returned to his work on his oratorio, and at Birmingham, in 1846, was produced with overwhelming success, the triumph of his life, the crown of his labors, the grand oratorio *Elijah*.

After the usual revision, this work was given during the following spring, in London, where its success exceeded that which it had met at Birmingham. The prince consort, Albert Edward, on this occasion wrote to the composer that he was the "Savior of the art from the service of Baal." Queen Victoria and the prince consort had always shown a warm appreciation of Mendelssohn's work. On this, his last visit, to England, they requested him to play for them privately, and her Majesty sang some of his songs to his accompaniment.

The public performances given during this trip proved to be his last. His health had for some time been failing under the stress of work which he had taken upon himself, in the tireless energy and in the restless craving for occupation that were characteristic of the man.

While in this condition, the composer received the news of the greatest grief his life had known, the death of his beloved sister Fanny. The two had been the closest confidants from their childhood, and the most perfect musical affinity, and sympathy, existed between them. When the bond was broken, it was almost a death-blow to the sensitive, affectionate brother. To escape from his sorrow, he plunged deep into work, and poured out his grief in the *Violin Quartet in F Minor*, which is a cry of suffering that would be painful but for its surpassing beauty. He worked at the oratorio of *Christus*, and an opera, *The Lorelei*, both of which were left unfinished, and he returned again to an old idea of writing music for Shakespeare's *Tempest*.

The *Night Song* (opus 71, No. 6), written on October 9, 1847, was the last work of the composer's pen. On the same day, while arranging for the performance of *Elijah*, he was stricken with an illness which developed into apoplexy, and he died November

4, 1847, at the age of thirty-eight years. Mendelssohn was the third of the great composers who did not reach the age of forty. The master was honored in death, as in life. The funeral ceremonies were elaborate, and impressive, and thousands followed the bier to the grave. Mendelssohn sleeps near that beloved sister, whose death so fatally affected him.

The truth and simplicity of his character, and "his fierce scorn of a lie," Mendelssohn carried into his music. "I take music in a very serious way," he wrote, "and I consider it inadmissible to compose anything I do not thoroughly feel."

Mendelssohn did not, like Schumann, occupy a position as a link in the chain of musical evolution, but his influence, and popularity, in England were greater than those of any other musician after Händel. His music is characterized by the utmost finish, and polish. It is charged with a lack of dramatic force, fire, and depth of feeling, and with a "fatal suavity" that prevents it from being truly great. This is perhaps due to the absence of adversity in his life. He could not portray the depths of emotion which he had never sounded. But he had a surpassing gift of modern melody, which he combined with the classical style of the masters, adhering strictly to the established forms of his art. He believed, however, that the aim of music was the giving of pleasure to the hearer, without any deep underlying meaning, such as Beethoven put into his works, and this aim his music accomplishes. He has been called "a master of daintiness," and in the graceful, and delicate playfulness such as runs through his *Midsummer Night's Dream*, no other excels him. In this vein, he is fond of introducing fairies, goblins, and elves, not in a weird, grewsome aspect, but in their humorous and fanciful character. Delightful examples of this supernatural element are found in the *Midsummer Night's Dream*, and the *Walpurgis Night*.

Perhaps the most frequently heard of all Mendelssohn's music is the wedding march from *Midsummer Night's Dream*. Critics universally consider this march one of the finest and noblest ever written. It "sings the marriage joy of all the world." His overtures are masterpieces of their kind, full of poetic imagination, and delicate feeling. The oratorios are imbued with the deep religious fervor of Bach, and Händel. Of *St. Paul*, which is based upon the passion music of Bach, Moscheles said, "Its chief qualities are majesty, and noble simplicity, deep feeling, and an antique form." *Elijah*, which was for nine years in the composer's mind, follows the style of Händel, and holds with Haydn's *Creation* the next place to *The Messiah* in the affections of the people. It is the most dramatic of all oratorios, and could be acted like an opera. Opera was, however, one form of composition which he scarcely touchéd.

Among Mendelssohn's chamber music, the best known is the collection of graceful and beautiful fancies known as *Songs without Words*. The composition of these piano songs, which were a form of music original with Mendelssohn, extends over almost his whole lifetime. The first book was published when the composer was twenty-one years of age.

Mendelssohn's songs, follow, as a rule, the form created by Schubert. They are more carefully finished than those of the great lyric master, but are less broad, and effective, in treatment, and in many cases lack the warmth, the freshness, and the feeling, in short the perfect naturalness, of Schubert's. Many of them are, however, very beautiful.

Mendelssohn was a magnificent piano-player and a master of the organ. But it is not only as a composer and a performer that his name will stand out in the history of music. For his earnest and successful endeavors to bring before the public the works of other masters which had been forgotten, or had never been appreciated, especially those of Bach, until they were known, and loved, as they deserved, Mendelssohn must ever have the gratitude of all who are interested in music and musical progress.

Mendenhall, Thomas Corwin.—Born near Hanover, Ohio, 1841. A physicist. He was professor of Physics and Mechanics in Ohio University (1873-78), when he became professor of Physics in the Imperial University at Tokio, Japan. He returned to the U. S. in 1881, and resumed his chair in Ohio University, held a professorship in the U. S. signal service (1884-86), when he became president of the Rose Polytechnic Institute, Terre Haute, Ind. He was superintendent of the U. S. coast survey (1889-94), and then became president of the Worcester Polytechnic Institute.

Mend One's Fences.—John Sherman had a fine tract of land near Mansfield, his Ohio home. On one occasion he went from Washington to Ohio, on a mission that was chiefly political, and jocosely remarked to a friend that he had come to look after his fences. The phrase was immediately adopted into the political literature of the country, and was commonly applied to a congressman or senator who might visit his home to promote his chances for reelection.

Menhaden, The.—See HERRING, 2686.

Mennonites.—A Christian denomination founded in the 16th century at Friesland, by Menno Simons. Their leading tenets are: baptism on profession of faith, refusal of oaths, of civic offices, the support of the state in acts of war, and a leaning to asceticism.

Menominee Indians.—A tribe of the Algonquin family, which, since it became known to the whites, has occupied lands in Wis. and upper Mich., chiefly along the Menominee River and the west side of Green Bay, extending south to the Fox River, and west to the Mississippi. The name means "wild rice men," from their principal article of food. They now number about 1,300 at the Green Bay (Wis.) Agency. In the early Indian wars, they sided with the British.

Mensuration.—The process of measuring lengths, surface, volume, and capacity, or of determining the same by measurement and calculation. Length may be determined by mechanical measurement; surface and solidity are determined by algebraical and geometrical calculations. The following are the rules for calculating the most important measurements:—

1. To find the circumference of a circle, multiply the diameter by 3.1416.

2. To find the area of a circle, multiply the square of the diameter by the decimal .7854.

3. To find the circumference of an ellipse, multiply half the sum of the two diameters by 3.1416.

4. To find the area of an ellipse, multiply the longer axis or diameter by the shorter, and the product by the decimal .7854.

5. To find the area of a square, multiply one side by itself.

6. To find the area of a rectangle, multiply the length by the breadth, or the base by the height.

7. To find the area of a parallelogram, multiply the base by the perpendicular height.

8. To find the area of a triangle, multiply half the base by the perpendicular height.

9. To find the area of a trapezium, divide the trapezium into two triangles by a line joining two of its opposite angles: the sum of these triangles will be the area of the trapezium.

10. To find the area of a trapezoid, multiply the sum of the two parallel sides by the perpendicular distance between them, and one-half the product will be the area.

11. To find the surface of a sphere, multiply the square of the diameter by 3.1416.

12. To find the surface of a cylinder, multiply the diameter by the height, and that product by 3.1416.

13. To find the solid contents of a right prism, multiply the length, breadth, and height.

14. To find the solid contents of a cylinder, multiply the area of the base by the height.

15. To find the solid contents of a sphere, multiply the cube of the diameter by the decimal .7854.

16. To find the solid contents of a cone, multiply the area of its base by one-third of its slant height.

17. To find the solid contents of the frustum of a cone, add the squares of the two diameters, to this add the product of the two diameters, multiply the sum by the decimal .7854 and the product by one-third the height.

Mental Development.—715.

Mental Training at Home.—4632.

Men with More than One Calling.—4823.

Mercer, Charles Fenton.—Born at Fredericksburg, Va., 1778; died near Alexandria, Va. 1858. A politician, Federalist, and Whig member of Congress from Va. (1817-39).

Merchant Marine.—The British navigation acts, beginning in 1645, prohibited importations with the Colonies, except in English or Colonial built ships. Though seriously restricting American commerce, these acts served to stimulate the shipbuilding industry in the U. S. Between 1789 and 1797 the registered tonnage increased 384 per cent. From 1837 to 1857, the tonnage increased from 810,000 to 2,268,000, and in 1861 the aggregate tonnage of American registered vessels reached the highest point in its history—5,539,813. This nearly equaled the combined tonnage of all other nations except Great Britain, which was slightly in excess of it. For various reasons, American shipping has fallen off since the Civil War, until it became quite insignificant when compared with what it should be. Congress has given much attention to the building up of our merchant marine and at this time (1901) a marked advance is apparent.

Mercury.—See GREEK AND ROMAN MYTHOLOGY, 1615.

Meredith, George.—Flint Cottage, Boxhill Surrey, England, age 73; the most cryptic, brilliant, and epigrammatic of modern novelists; venerated by all litterateurs; President Society of Authors; published first book of poems 50 years ago, and his most famous novel, "The Ordeal of Richard Feverel," in 1859.

- Merger.**—Absorption of a lesser by a greater debt or obligation.
- Meriden.**—A city in New Haven Co., Conn.; the seat of flourishing manufactures; noted for Britannia-metal ware. Pop. (1900), 24,296.
- Meridian.**—The capital of Lauderdale Co., Miss. Pop. (1900), 14,050.
- Mérimée, Prosper.**—(1803-1870.) A prominent French man of letters.
- Merlin.**—(1) A Saxon bard of the 6th century. (2) An enchanter in the legends of the romance of Arthur, a friend and counsellor of the king, prominent in Tennyson's "Idylls of the King."
- Merlin.**—See ARTHURIAN LEGEND, 1783.
- Merovingians.**—A once vigorous dynasty that ruled Germany from the time of Clovis to that of Charlemagne. With the death of Dagobert (638 A. D.) the kings became mere shadows of power beside their high officers of State. These were called Mayors of the Palace. Charles Martel and the Pepins of Heristal, about the close of the Merovingian line, filled this ancestral office, and were the real rulers of the country. Their descendants afterward succeeded to the throne of Germany.
- "Merrimac," The.**—A 40-gun frigate formerly of the U. S. navy, which fell into the hands of the Confederates by the evacuation of Norfolk, Va., in 1861. The Confederates placed upon the "Merrimac" a heavy iron plating and sent her to destroy the Union vessels lying in Hampton Roads. For a description of the "Merrimac" and an account of her career and of her battle with the "Monitor," the first turreted war vessel ever built, see sketch of JOHN ERICSSON, 174-78.
- Merrimac River.**—A river in N. H. and northeastern Mass. It furnishes water-power to Manchester, Nashua, Lowell, Lawrence, etc.
- Merriman, Henry Seton.**—The pseudonym of Hugh S. Scott.
- Merritt, Wesley.**—Born in New York, 1836. A U. S. army officer. He was graduated from West Point and at the beginning of the Civil War was a captain in the 2d U. S. Cav. He was made a brig.-gen. of vols. in 1862, and a maj.-gen. in 1864. He served with great distinction as a cavalry leader under Sheridan, in 1864-65. In the regular army he was promoted to brig.-gen. in 1887, and to maj.-gen. in 1895. He served as Supt. at West Point, and, successively, as commander of the Depts. of Mo., Dak., and the East. He commanded the U. S. troops first sent to the Philippine Islands, in 1898, and in that capacity participated in the capture of Manila from the Spaniards.
- Merryman Case.**—Merryman, a citizen of Md., was arrested in his home in 1861, by order of an officer of the U. S. army and charged with treason. He was imprisoned in Fort McHenry. Chief-justice Taney granted a writ of habeas corpus, which the officer in charge of the prisoner, refused to execute on the ground that the President had suspended the operation of the habeas corpus. The case was taken before the Supreme Court of the U. S., which decided that power to suspend the writ of habeas corpus was not vested in the President, Congress alone having such jurisdiction, and that a military officer had no right to arrest a person not subject to the rules and articles of war, except in aid of judicial authority. (See MILLIGAN CASE.)
- Mesmer, Friedrich Anton.**—(1733-1815.) A German physician who originated the theory of animal magnetism, or mesmerism.
- Mesopotamia.**—The fertile alluvial plain lying between the rivers Tigris and Euphrates. It has successively been the seat of the Assyrian, the Chaldean, and the Babylonian empires, and has frequently been conquered and reconquered by the great ancient monarchies. At present it is a Turkish province having its capital at Bagdad.
- Message, Presidential.**—A written communication by the President to Congress. At the beginning of each session an annual message is transmitted in which the President reviews our standing and condition as a nation abroad and at home, and recommends such action by the House and Senate as may be deemed necessary for the welfare of the country and the correction of abuses. Special messages are sent from time to time to either or both Houses, submitting treaties or correspondence, or in answer to a request from either branch for particular information, or to recommend specific or immediate legislation. Veto messages are sent with the return of bills which the President disapproves, in which he states his reason for withholding his signature. After pointing out wherein a bill fails to meet the requirements of the case, he usually suggests the way to an effective measure that may receive executive sanction. Washington and John Adams personally read their annual messages to Congress. Jefferson inaugurated the custom, since followed by all of his successors, of sending messages in writing to Congress. They are carried by the private secretary of the President, who is received at the door of the Senate or House and whose presence is formally announced by an officer of the body, whereupon there is an immediate suspension of whatever business may be in hand and he delivers the message. It is at once read by one of the clerks.
- Messenger.**—A gray, thoroughbred horse, by Mambrino, imported into the U. S. from England about 1788. All the main lines of trotting-horses except the Morgans and the Clays are derived from him.
- Meteors.**—See PLANETS, 2992.
- Method as a Success Winner.**—4466.
- Methuen, Baron.** Corsham Court, Wilts, England, age 56; began his military career in the Scots Guards, and saw active service in W. and S. Africa; he was second in command (under Sir Redvers Buller) in the beginning of the S. African War of 1900, sustaining the severe defeat at Magersfontein, after several dearly bought victories. He was defeated, wounded and taken prisoner by the Boers under Gen. Delarey in March, 1902. He was set at liberty, after a few days' imprisonment, by the clemency of his captors.

Metric System of Weights and Measures.—The metric system originated in France in 1790, and has been adopted by all European nations except Great Britain and Russia, where it is permissive. Its name comes from the word *meter*, from which all the original factors are derived.

The **METER**, unit of length, is nearly the ten-millionth part of a quadrant of a meridian, of the distance between Equator and Pole. The International Standard Meter is, practically, nothing else but a length defined by the distance between two lines on a platinum-iridium bar at 0° Centigrade, deposited at the International Bureau of Weights and Measures, Paris, France.

The **LITER**, unit of capacity, is derived from the weight of one kilogram pure water at greatest density, a cube whose edge is one-tenth of a meter and, therefore, the one-thousandth part of a metric ton.

The **GRAM**, unit of weight, is a cube of pure water at greatest density, whose edge is one-

hundredth of a meter, and, therefore, the one-thousandth part of a kilogram, and the one-millionth part of a metric ton.

One silver dollar weighs 25 grams, 1 dime = 2½ grams, 1 five-cent nickel = 5 grams.

The Metric System was legalized in the United States on July 28, 1866, when Congress enacted as follows:—

“The tables in the schedule hereto annexed shall be recognized in the construction of contracts, and in all legal proceedings, as establishing, in terms of the weights and measures now in use in the United States, the equivalents of the weights and measures expressed therein in terms of the metric system, and the tables may lawfully be used for computing, determining, and expressing in customary weights and measures the weights and measures of the metric system.”

The following are the tables annexed to the above:—

MEASURES OF LENGTH.

Metric Denominations and Values.	Equivalents in Denominations in Use.
Myriameter..... 10,000 meters.	6.2137 miles.
Kilometer..... 1,000 meters.	0.62137 mile, or 3,280 feet 10 inches.
Hectometer..... 100 meters.	328 feet 1 inch.
Dekameter..... 10 meters.	393.7 inches.
Meter..... 1 meter.	39.37 inches.
Decimeter..... 1-10 of a meter.	3.937 inches.
Centimeter..... 1-100 of a meter.	0.3937 inch.
Millimeter..... 1-1000 of a meter.	0.0394 inch.

MEASURES OF SURFACE.

Metric Denominations and Values.	Equivalents in Denominations in Use.
Hectare..... 10,000 square meters.	2.471 acres.
Are..... 100 square meters.	119.6 square yards.
Centare..... 1 square meter.	1,550 square inches.

MEASURES OF CAPACITY.

METRIC DENOMINATIONS AND VALUES.			EQUIVALENTS IN DENOMINATIONS IN USE.	
Names.	Number of Liters.	Cubic Measure.	Dry Measure.	Liquid or Wine Measure.
Kiloliter or sterc.	1,000	1 cubic meter.....	1.308 cubic yards.....	264.17 gallons.
Hectoliter.....	100	1-10 of a cubic meter.....	2 bush. and 3.35 pecks.....	26.417 gallons.
Dekaliter.....	10	10 cubic decimeters.....	9.08 quarts.....	2.6417 gallons.
Liter.....	1	1 cubic decimeter.....	0.908 quart.....	1.0567 quarts.
Deciliter.....	1-10	1-10 of a cubic decimeter.....	6.1022 cubic inches.....	0.845 gill.
Centiliter.....	1-100	10 cubic centimeters.....	0.6102 cubic inch.....	0.338 fluid ounce.
Milliliter.....	1-1000	1 cubic centimeter.....	0.061 cubic inch.....	0.27 fluid dram.

WEIGHTS.

METRIC DENOMINATIONS AND VALUES.			EQUIVALENTS IN DENOMINATIONS IN USE.
Names.	Number of Grams.	Weight of What Quantity of Water at Maximum Density.	Avoirdupois Weight.
Miller or touneau.	1,000,000	1 cubic meter.	2204.6 pounds.
Quintal	100,000	1 hectoliter	220.46 pounds.
Myriagram	10,000	10 liters	22.046 pounds.
Kilogram or kilo	1,000	1 liter	2.2046 pounds.
Hectogram	100	1 deciliter	3.5274 ounces.
Dekagram	10	10 cubic centimeters	0.3527 ounce.
Gram	1	1 cubic centimeter	15.432 grains.
Decigram	1-10	1-10 of a cubic centimeter	1.5432 grains.
Centigram	1-100	10 cubic millimeters	0.1543 grain.
Milligram	1-1000	1 cubic millimeter	0.0154 grain.

APPROXIMATE EQUIVALENTS.

A meter is about a yard; a kilo is about 2 pounds; a liter is about a quart; a centimeter is about $\frac{1}{2}$ inch; a metric ton is about same as a ton; a kilometer is about $\frac{1}{2}$ mile a cubic centimeter is about a thimbleful. A nickel weighs 5 grams.

The diameter of the nickel is two centimeters; therefore, five of them placed in a row will give the length of the decimeter. As the kiloliter is the cubic meter, this furnishes the key to the measurement of capacity. The nickel therefore gives the key to the entire system.

Metz.—The capital of Lorraine (or Lothringen), situated on the river Moselle. It is one of the strongest fortresses in Europe and has sustained some famous sieges, the most important being in the Franco-German war when Bazaine surrendered 173,000 men to Prince Frederick Charles, Oct. 7, 1870.

Meuse.—A department of northeastern France, traversed by the river Meuse. Its chief industries are manufactures and the raising of live stock.

Mexico.—A North American Republic, bounded on the north by the U. S., east by the Gulf of Mexico and the Caribbean Sea, south by British Honduras, Guatemala, and the Pacific Ocean, and by the latter also on the west. It has 27 states, one federal district, and two territories. Mining, agriculture, and cattle-raising are extensively carried on. The government is modeled after that of the U. S. The language is Spanish and the religion is Roman Catholic. The people are chiefly Creoles, Indians, and mixed races. Area, 75,664 sq. miles; pop., about 12,100,000.

Mexico (City of), Surrender of.—After a series of brilliant operations, the U. S. forces overcame three times their number and were in possession of the capital city of Mexico. Before daylight of Sept. 14, 1847, the city council had waited upon Gen. Scott, the American commander, and demanded terms of surrender. He replied that the city had come into his power the night before and that the terms accorded would be imposed by the American army. At 7 o'clock the U. S. flag was hoisted on the National Palace, and at 9 o'clock Gen. Scott rode into the Plaza, escorted by the Second U. S. Dragoons. Soon after taking pos-

session of the city, fire was opened upon the American soldiers from the roofs of houses, windows, and street corners, by about 2,000 convicts who had been liberated the night before by the fleeing government. These were joined by as many soldiers who had disbanded themselves and assumed the part of citizens. This firing was kept up in a desultory way for 24 hours and many soldiers were killed or wounded.

Mexican War.—The Mexican War grew out of the annexation of Texas by the U. S. Mar. 2, 1836, Tex. seceded from Mexico and declared her independence, which she maintained by the defeat of Santa Anna in the battle of San Jacinto, Apr. 21, 1836. The U. S., England, France, and Belgium recognized the new government as independent. Dec. 29, 1845, Tex. was annexed to the U. S. A dispute as to the boundary induced President Polk to order Gen. Taylor to take a position in the contested territory on the left bank of the Rio Grande. Here, near Matamoras, he was attacked Apr. 23, 1846, by Mexicans under Arista and a portion of his army was captured. Taylor advanced into the north of Mexico, leaving garrisons at Corpus Christi and at Fort Brown, opposite Matamoras, and after the battles of Palo Alto (May 8, 1846), Resaca de la Palma (May 9, 1846), Buena Vista (Feb. 22, 23, 1847), and a number of lesser engagements, in all of which the Mexicans were defeated, he obtained control of all northern Mexico. Gen. Scott, landing at Vera Cruz, advanced to the City of Mexico, defeating Santa Anna at Cerro Gorda (Apr. 17, 18, 1847), Contreras (Aug. 19, 20, 1847), Churubusco (Aug. 20, 1847), and Moliu del Rey (Sept.

7, 8, 1847), caused the surrender of the capital and the termination of the war Sept. 14, 1847. During these operations in Mexico, Gen. Kearney and Lieut. Fremont occupied Cal. and N. Mex. with American troops. Under the treaty of peace, signed at Guadalupe Hidalgo, on payment by the U. S. of \$15,000,000 and in addition

thereto private claims which amounted to \$3,250,000, Mexico ceded to it the territory now comprising Nev., Utah, most of Ariz., a large part of N. Mex., portions of Col. and Wyo., and all of Cal. (See sketches of the various battles given under their respective names in this volume.)

MEYERBEER

ALTHOUGH German by birth, Meyerbeer was identified with French opera. He was born in Berlin, September 5, 1791. His name was originally Jacob Liebmann Beer, but at the death of a rich uncle named Meyer, who left the boy all of his property, the future composer's name was changed to Meyerbeer. Later, when he came under the Italian influence in music, he translated his first name, Jacob, into Giacomo, so that he is always known as Giacomo Meyerbeer. He belonged to a wealthy Jewish family, distinguished for love of letters, science, and art. His father held a prominent position in the financial and commercial world of Berlin, and the children grew up in a highly intellectual atmosphere.

Meyerbeer's musical ability began to manifest itself when he was four years old, and it was strongly encouraged by his elders. At the age of six, he was a brilliant performer in the private concerts of Berlin, and at nine years of age, he was considered one of the best pianists in the Prussian capital. In 1810, Meyerbeer was sent to Darmstadt, to receive instruction from the Abbé Vogler, the foremost teacher of the time in theory and composition. While here, he formed an intimate friendship with Weber which continued until the latter's death.

After two years of study, Meyerbeer set out with Vogler and his pupils upon a tour of Germany, during which he produced at Munich, under his master's auspices, his first opera, *Fepthah*.

Meyerbeer then went to Italy, and upon his arrival there, witnessed a performance of Rossini's *Tancredi*, then at the height of its success. Up to this time he had heard no Italian music, but now, he was carried away with enthusiasm for this new romantic school, as opposed to the old classic style in which he had been trained. He determined to adopt the melodious Italian style, and after a period of study, he composed, in rapid succession, a number of operas which established his fame in Italy though they were coldly received in Germany. After a tour of the Italian cities, in order to superintend the production of his works, Meyerbeer went to Paris, and henceforth the French capital was his home.

In 1831, Meyerbeer produced *Robert le Diable*. The sensation which this work created was unprecedented in the history of the Parisian stage. The individuality displayed in its combination of Oriental gorgeousness, German philosophy, French vivacity, and Italian warmth and passion, were, from the nature of his previous works, entirely unlooked for. The *furor* which greeted the opera in Paris, was repeated all over Europe, though it was most popular in Germany and France. Meyerbeer, himself, directed its presentation in London, where Jenny Lind achieved her most brilliant triumphs by her impersonation of *Alice*. The opera has been translated into German, English, Italian, Dutch, Russian, Polish, and Danish, and has been produced wherever opera is played. Its picturesque, pathetic, and supernatural elements appeal to all nations. *Robert, toi que j'aime*, the song of the half-mad Isabelle, is probably the most popular air that Meyerbeer ever wrote.

After the splendid success of *Robert le Diable*, Meyerbeer was engaged by the directors of the French opera to write the *Huguenots*, which was brought out in 1836.

The opera failed to arouse immediately the enthusiasm produced by its predecessor, but in time it attained a higher place in the esteem of the people than that held by *Robert le Diable*, and it is now one of the stock pieces of all great opera houses. After its performance in the Prussian capital, King Frederick William IV. created for the composer the office of General Director of Music in Prussia.

Le Prophete, produced in 1849, fails to reach the standard of the *Huguenots*. In 1859, the composer wrote the comic opera *Dinorah*, which was performed in Paris and in London, and in the same year he finished his last work, *L'Africaine*. Meyerbeer never saw this opera performed. In the midst of preparations for its production in Paris, he died, in 1864, at the age of seventy years. He had received many honors, among them, membership in the Berlin Academy of Fine Arts, and in the French Institute; also the Orders of Leopold, the Legion of Honor, and the Southern Cross.

Meyerbeer possessed great dramatic power, and was a master of the resources of the orchestra; but he was too anxious for immediate approval and applause to live up to his own ideals of art. He wrote down to his public, instead of striving to draw the people up to a higher taste. He dominated French opera for many years, and his works are frequently heard to-day. Like his fellow-pupil, Weber, he exercised a noticeable influence upon modern orchestration.

Miami Indians.—A tribe of North American Indians first known in 1675 in southern Wis. About 1690 they settled on the St. Joseph River in southern Mich. and were considered afterward in treaty negotiations as owners of the entire Wabash country and western Ohio. They now number less than four hundred.

Miami River.—A river in Ohio; length over 150 miles.

Miantonomoh.—Died, 1643. A sachem of the Narraganset Indians, nephew of Canonicus. In 1637 he aided the colonists of Conn. and Mass. in defeating the Pequots. He became involved in a war with Uncas, sachem of the Mohegans, was defeated, captured and put to death with the approval of the English, who claimed jurisdiction over both tribes.

Michelangelo.—3420.

Michelet (*mēsh-lā'*), **Jules.**—(1798–1874.) A noted French historian. His greatest work was the "History of France."

Michigan.—A north central state of the United States. It consists of two peninsulas, very irregular in form, separated by the Strait of Mackinac; both are nearly surrounded by water; the southern peninsula lies between Lake Michigan on the west, the Strait of Mackinac on the north, and Lakes Huron, St. Clair, and Erie and the St. Clair and Detroit rivers on the east; on the south it is bounded by Ohio and Ind.; the northern or upper peninsula, much smaller in area, lies between Lake Superior, St. Mary's River, and the Strait of Mackinac, bounded by Wis. on the south and west. The territory was explored by the French in the 17th century; the first permanent settlement was at Sault Ste. Marie in 1668; it was ceded to Great Britain in 1763 and to the U. S. in 1796; it formed part of the Northwest Territory and was organized as a separate territory in 1805; Detroit was taken by the British in 1812, but

was retaken by the Americans in 1813; Michigan was admitted into the Union in 1837. The upper peninsula is mountainous and produces enormous quantities of iron, copper, and other minerals; salt and lumber are also among its chief products; the lower peninsula is level and fertile and yields especially grain and fruit; it has large fishery interests. It has 85 counties; Lansing is the capital and Detroit the chief city; other principal towns are Grand Rapids, Saginaw, Bay City, Jackson, Kalamazoo, Port Huron, Muskegon, and Battle Creek. Area, 58,915 sq. miles; pop. (1900), 2,420,982; called the Wolverine State and the Lake State.

Michigan, Lake.—One of the five great lakes of the U. S., inclosed by Mich. on the north and east, Ind. on the south, and Ill. and Wis. on the west. Its chief bays are Green Bay and Grand Traverse Bay; its chief tributaries are the Fox, Manistee, Menominee, Muskegon, Kalamazoo, Grand, and St. Joseph rivers. Chicago and Milwaukee are the chief cities on its banks. It discharges by the Strait of Mackinac into Lake Huron. Length, about 340 miles. Greatest width, about 85 miles. Greatest depth, 870 feet. Mean height above sea-level, 582 feet. Area, over 22,000 sq. miles.

Michigan, University of.—A coeducational institution at Ann Arbor, Mich. It is under state control; was opened in 1841; contains collegiate, medical, and law departments, with an observatory, dental college, school of pharmacy, scientific museums, and library of 130,000 vols.

Michigan City.—A city in La Porte Co., Ind., on Lake Michigan. It has a lumber trade. Pop. (1900), 14,850.

Michilimackinac.—See MACKINAC.

Midas.—A king of Phrygia who, according to the Greek legend, received from the god Dionysus the power of turning whatever he touched into gold.

- Middle Ages.**—The period between the ancient and modern history in Europe. By Hallam it was regarded as extending from about 500 to 1500 A.D.
- Middleborough.**—A town in Plymouth Co., Mass. Pop. (1900), 6,885.
- Middlebury.**—The capital of Addison Co., Vt., on Otter Creek; the seat of Middlebury College (Congregational). Pop. (1900), 3,045.
- Middle Creek (Ky.), Battle of.**—One of the early actions of the Civil War. At the end of 1861 Gen. Humphrey Marshall, with a Confederate force of 2,500, had taken a position in eastern Ky. and was threatening to advance northward. Col. James A. Garfield, 42d Ohio regiment, with 1,800 men, was sent to drive Marshall from that section. After a fatiguing march, during which his troops suffered much from the inclemency of the midwinter weather, Garfield attacked Marshall, Jan. 10, 1862, at Middle Creek, near Paintsville, Johnson Co. The battle lasted all day, when Marshall abandoned the field burning his stores and equipage. The losses in killed and wounded were small.
- Middle Park.**—A plateau in Grand Co., northern Col. Length from 60 to 70 miles.
- Middle States.**—A collective name for the states of N. Y., N. J., Pa., Del., and Md.
- Middleton, Arthur.**—Born, 1742; died, 1787. A patriot. He was delegate from S. C. to the Continental Congress in 1776, and signed the Declaration of Independence. He sat again in Congress (1781-83).
- Middleton, Henry.**—Born, 1771; died at Charleston, S. C., 1846. A politician and diplomatist, son of Arthur Middleton. He was governor of S. C. (1810-12), representative in Congress (1815-19); and minister to Russia (1820-31).
- Middleton, Thomas.**—(About 1570-1627.) A famous English playwright and dramatist.
- Middletown.**—(1) A manufacturing city in Orange Co., N. Y. Pop. (1900), 14,522. (2) One of the capitals of Middlesex Co., Conn., on the Connecticut River. It is a port of entry, is the seat of Wesleyan University (M. E.), Berkeley Divinity School (Episcopal), a state insane asylum, and an industrial school for girls. Pop. (1900), 17,486.
- Midnight Appointments.**—During the last days of his presidential term, John Adams, piqued at the success of Jefferson whom he had opposed for the presidency, made a number of Federal appointments, in every instance of men who were opposed to Jefferson and his principles. Among the appointments were 16 circuit judges. The commissions of some of these appointees were signed just before midnight of March 3, 1801 hence the term "midnight appointments."
- Mifflin, Thomas.**—Born at Philadelphia, 1744; died at Lancaster, Pa., 1800. A Revolutionary general and politician, a member of the "Conway Cabal" in 1777. He was president of the executive council of Pa. (1788-90), and governor of Pa. (1790-99).
- Mignet (*mên-yâ*), François Auguste Marie.**—(1796-1884.) One of the most prominent French historians. Elected to the Academy in 1836.
- Miguel, Dom (MARIA EVARISTO MIGUEL).**—(1802-1866.) Third son of John VI. of Portugal. Was expelled from the country for political reasons; afterward became regent and usurped the throne. Was dethroned and in 1834 capitulated.
- Milan.**—A city of northern Italy, capital of the province of Milan. It was the episcopal residence of Ambrose in the 4th century. It is famous for its elaborate cathedral, Leonardo da Vinci's fresco of "The Last Supper" and other works of art.
- Milan Decree.**—Nov. 11, 1807, France and England being then at war, the king of Great Britain and his privy council issued a decree forbidding trade between the U. S. and any European country, under Napoleon's power. Napoleon thereupon, in retaliation, Dec. 7, 1807, issued the Milan Decree, in which he declared to be denationalized, whether found in continental ports or on the high seas, any vessel which should submit to search by a British vessel, or should touch at or set sail to or from Great Britain or her colonies.
- Mileage.**—Compensation for traveling expenses at a certain rate per mile. The first Congress passed a law allowing each member \$6 for every 20 miles traveled in going to and from the place of meeting. In 1818 this was raised to \$8. In 1856 the allowance of mileage was limited to two sessions of each Congress. Railway transportation having greatly cheapened the cost of travel, Congress in 1866 reduced the mileage to 20 cents a mile. This is to cover railroad fare and the miscellaneous expenses incident to traveling.
- Miles, Nelson Appleton.**—Lieut.-general commanding the U. S. army, was born at Westminster, Mass., Aug. 8, 1839. At the outbreak of the Civil War, he joined the 22d Mass. Volunteers as lieutenant, and, with one exception, was in every battle of the Army of the Potomac, distinguishing himself especially at Fredericksburg, Chancellorsville, Spottsylvania, Richmond, and Malvern Hill, and was thrice wounded. After the war he earned fame as an Indian fighter, particularly in engagements against hostile Sioux in Montana, the Nez Percés, Bannocks, and other troublesome tribes on the western frontiers. He represented the U. S. army while the Turco-Grecian war was in progress, and also at the late Queen Victoria's Diamond Jubilee. In the war with Spain, he led an expedition to Porto Rico, and effected a landing (July, 1898) at Guanico. On the retirement of General Schofield he succeeded to the command of the U. S. army, and in 1901 was raised to the rank of lieutenant-general. He has published a work on "Military Europe" and a volume of reminiscences, entitled "Personal Recollections."
- Miletus.**—An ancient city on the southwestern coast of Asia Minor, early colonized by Ionian Greeks, and later a center of literature and philosophy. It contained a temple of Apollo, noted for its splendor.
- Milford.**—A town in Worcester Co., Mass. In has manufactures of boots. Pop. (1900), 11,376.

Military Academy.—As early as 1776 the idea of a national military academy had been advanced. A committee of the Continental Congress was appointed to prepare and bring in a plan of a military academy of the army. Washington called the attention of Congress to the matter in 1793, and in 1796 recommended the institution of such an academy. Mar. 16, 1802, Congress passed an act for its establishment. It is located at West Point, N. Y., on the Hudson River. The present high standard of the academy is due largely to the efforts of Maj. Sylvanus Thayer, of the Corps of Engineers, known as the "Father of the Academy."

The general commanding the army has, under the War Dept., supervision of the academy. The immediate government consists of a superintendent, commandant of Cadets, and seven commissioned professors. The corps of cadets consists of one from each Congressional district, one from each Territory, one from the District of Columbia, and 12 from the U. S. at large. Candidates must be between 17 and 22 years of age, at least 5 feet in height, of sound health and good moral character, and possessed of a common-school education. They take the oath of allegiance to the U. S. and serve 8 years unless sooner discharged. Graduates are commissioned second lieutenants by the President. The U. S. has also the Engineer School at West Point, N. Y., the Artillery School at Fort Monroe, Va., the Infantry and Cavalry School at Leavenworth, Kan., and the Light Artillery and Cavalry School at Fort Riley, Kan.

Militia.—Citizens of a state enrolled as soldiers for training and discipline, but only called into active service on emergencies, as distinguished from the regular soldiers, who are in constant service. The Constitution empowers Congress "to provide for calling forth the militia to execute the laws of the Union, suppress insurrections, and repel invasions." In 1792 an act was passed to provide for the national defense by establishing a uniform militia system throughout the U. S., by the enrollment of every free, able-bodied white male citizen between the ages of 18 and 45. An act of Mar. 2, 1867, permitted the enrollment of negroes. The militia was called out by Federal authority in 1794, to quell the Whisky Rebellion in western Pa., during the War of 1812, and during the Civil War.

MILK, USEFUL INFORMATION ABOUT.—

Feed has a much greater influence on quantity of milk produced than upon its quality.

In well-regulated dairies each cow is milked during ten months of the year. Any milk having a large amount of sediment is suspicious; particles of dirt are a sign that germs are abundant; thus dirty milk may be dangerous as well as disgusting. Any milk having an unnatural appearance should be discarded.

Milk contains all the ingredients needed for nourishment. An ordinary glass of buttermilk contains as much nourishment as half a pint of

oysters, or two ounces of bread, or a good-sized potato.

Observe and enforce the utmost cleanliness about the cattle, their attendants, the stable, the dairy, and all utensils.

A person suffering from any disease, or who has been exposed to a contagious disease, must remain away from the cows and the milk.

The milker should be clean in all respects; he should wash and dry his hands just before milking and should wear a clean outer garment, used only when milking, and kept in a clean place at other times. Brush the udder and surrounding parts just before milking, and wipe them with a clean, damp cloth or sponge. Milk quietly, quickly, cleanly, and thoroughly. Cows do not like unnecessary delay. Commence milking at the same hour every morning and evening, and milk the cows in the same order. Throw away the first few streams of each teat; this milk is very watery and of little value, but it may injure the rest. Milk with dry hands; never allow the milk to come in contact with the hands. Do not allow dogs, cats, or loafers, to be around at milking time.

If any accident happens by which a pail full, or partly full, of milk becomes dirty, do not try to remedy this by straining, but reject all this milk and rinse the pail.

Weigh and record the milk given by each cow.

Remove the milk of every cow at once from the stable to a clean, dry room, where the air is pure and sweet. Do not allow cans to remain in stables, while they are being filled. Strain the milk through a metal gauze and a flannel cloth or layer of cotton as soon as it is drawn. Aerate and cool the milk as soon as strained.

Never close a can containing warm milk which has not been aerated. If the cover is left off the can, a piece of cloth or mosquito netting should be used to keep out insects.

If milk is stored, it should be held in tanks of fresh, cold water (renewed daily), in a clean, dry, cold room. Unless it is desired to remove cream, it should be stirred with a tin stirrer often enough to prevent the forming of a thick cream layer. Keep the night milk under shelter so rain cannot get into cans. In warm weather hold it in a tank of fresh cold water.

Never mix fresh warm milk with that which has been cooled.

Do not allow the milk to freeze.

Under no circumstances should anything be added to milk to prevent souring. Cleanliness and cold are the only preventives needed. All milk should be in good condition when delivered.

When cans are hauled far they should be full, and carried in a spring wagon. In hot weather cover the cans, when moved in a wagon, with a clean wet blanket or canvas.

Milk utensils for farm use should be made of metal and have all joints smoothly soldered. Never allow them to become rusty or rough inside. Clean all utensils by first thoroughly

Milk, Useful Information About.—Continued

rinsing them in warm water; then clean inside and out with a brush and hot water in which a cleaning material is dissolved; then rinse and lastly sterilize by boiling water or steam. Use pure water only. After cleaning keep utensils inverted, in pure air, and sun if possible, until wanted for use.

To make good butter one must have good milk, which comes only from healthy cows, fed on good sweet pasture, or on good, sweet grain and other forage. Leeks, wild onions, rag-weed, and certain other obnoxious weeds, give to the milk, and the butter made from it, a decidedly bad flavor. Impure water has its effect also, both on the health of the animals and on the quality of the milk.

When good, clean milk has been secured, the next operation is to separate the cream from the body of the milk. Milk should be set as soon as possible after being drawn from the cow. With open setting it must be in a room where the air is pure; a pantry with a door opening in the kitchen is a bad place. Cream should be allowed to sour or ripen for a number of hours before churning; if allowed to stand in a warm place for twelve to twenty-four hours, it will ripen. Ripening of cream is simply a matter of bacteria growth. Whether it ripens in a proper or improper manner depends upon the number and kinds of bacteria that chance to be in it at the beginning of the ripening. Among the kinds of bacteria found in the cream, there are some in the cream which produce a pleasant, desirable aroma and flavor. By proper care in barns and dairies the mischievous species may be in general kept out of the cream. Cleanly methods in cow stall and dairy will cause the cream to contain a small quantity of bacteria and only wholesome ones.

The odor from cooking vegetables and meat will surely injure the butter.

Many make butter in a cellar because it is cool, but it is apt to impart a musty, moldy smell to the butter. A cellar may be cool and yet so ventilated as to have pure air; then it is suitable for butter making.

The time to skim is when the milk has soured just enough to be a little thick at the bottom of the pans and to thicken the cream. Cream cannot be skimmed off when it is thin and sweet without loss. No milk should be taken with the cream. Cream with milk in it sours much more rapidly than cream with no milk in it. Whenever a new skimming is put into the cream jar or can, the whole should be thoroughly stirred and mixed.

Setting the cans in cold air will not be as effective in raising the cream as setting them in cold water, even though the temperature of the surrounding air is near the freezing point.

When shallow setting has been used, the cream is already ripened or partially so when taken off. No fresh cream should be put in the can for twelve to sixteen hours before churning, for if this is done the fresh cream will not

be ripened and the butter will not churn out fully. A quite common mistake is to get too small a churn. It should never be filled more than half of cream. One-third full is better because the cream has a better chance to fall. Before putting in the cream the churn should be scalded with hot water and then rinsed with cold water. The colder the cream is churned the less butter-fat will be left in the butter-milk and the more perfect will be the granules of butter. Cream from shallow setting can be churned at a somewhat lower temperature than that from deep setting.

To make butter float well, so that the butter-milk can be drawn off, throw in some salt, say one pint to each 20 gallons in the churn. Then revolve the churn a few times. Draw off the buttermilk through a hair sieve, so as to catch the granules of butter that escape from the churn.

Wash the butter twice each time using ten or twelve quarts of water to every 20 pounds of butter and revolve the churn a few times. Do not wash it more, nor let the water stay on a great while at a time, for this will be likely to wash out the flavor and aroma for which fine butter is prized.

Butter should be colored to suit the person for whom it is intended. The general market demands that butter should have a color, the year round, about like that of grass butter in June. The coloring matter should be put in the cream after it is all ready for the churn. When the butter would be nearly white if not colored, as is often the case in winter, about a teaspoonful of color is usually needed for eight pounds of butter. In summer, in times of drought, and in the fall, when cows are partly on dry feed, some coloring may be needed, but very little. It is well to be cautious, as it is better to have too little color than too much.

Good fine dairy salt should be used, and never the common, coarse barrel salt that is used by many; the finished butter should contain about three-fifths of an ounce of salt to the pound. A good way to insure uniform salting is to take the butter out of the churn, drain and press out part of the water on the worker, then weigh the butter and salt one ounce to the pound and work enough to get the salt evenly mixed throughout. Some more water will run off in the working and leave the butter salted about right. In this way it will be found that one churning will be salted very nearly like every other churning.

Generally speaking, it is better to work butter twice instead of once. The first time it should be worked just enough to mix the salt. After standing four or six hours it should be worked enough to obliterate the streaks and mottles. The second working expels some more of the water, for the salt has had time to draw the moisture together in drops and it is worked out. Such butter will be firmer and better and more satisfactory to the consumer than it usually is when worked but once. One

Milk, Useful Information About.—*Continued*

thing should always be borne in mind by the person who is making butter to sell. The butter is for somebody else to eat, and it is for your interest to make it to suit them whether it suits your taste or not.

In cleaning the butter bowl, ladle, worker, churn, and any other wooden utensil, they should first be washed with hot water, then scalded with boiling water or steam. They should be aired, but it will not do to have them much exposed to the sun, as that will cause working and cracking.

Milk Snake, The.—*See* SERPENTS, 2639.

Mill, John Stuart.—(1806-1873.) A celebrated English economist, logician, and philosopher. Among his most popular writings are his "Logic," "Essay on Liberty," and "Political Economy."

Millais, Sir John Everett.—English artist, 3480.

Mill-Boy of the Slashes.—A name applied to Henry Clay indicative of his humble condition in early life.

Millbury.—A town in Worcester Co., Mass. Pop. (1900), 4,460.

Milledgeville.—The capital of Baldwin Co., Ga., on the Oconee River. It was state capital before 1868. Pop. (1900), 4,219.

Miller, Hugh.—(1802-1856.) A Scottish geologist and author. A stonemason in youth, he was self-educated. His last and most important work, "The Testimony of the Rocks," explained the six days of creation as six periods of time of indefinite length.

Miller, James.—Born at Peterborough, N. H., 1776; died at Temple, N. H., 1851. A general and politician, distinguished at Lundy's Lane in 1814.

Miller, Joaquin (Originally CINCINNATUS HEINE MILLER).—Born in Wabash district, Ind., 1841. A poet. He removed to Ore. in 1854; was afterward a miner in Cal.; studied law; edited the "Democratic Register" in Eugene, Ore. (1866-70). He took his pseudonym from Joaquin Murietta, a Mexican brigand in whose defense he had written. He was a journalist at Washington, D. C., and returned to Cal. in 1887. His writings include "Songs of the Sierras," "Songs of the Sun Lands," "The Ships in the Desert," "Songs of Italy," and "Songs of the Mexican Sea."

Miller, Joseph.—(1684-1738) An English comedian, known chiefly from "Joe Miller's Jest Book," of which he was incorrectly supposed to be the author.

Miller, Samuel Freeman.—Born at Richmond, Ky., 1816; died at Washington, D. C., 1890. A jurist. He practised medicine for a time but eventually became a lawyer, and removed in 1850 from Ky. to Keokuk, Iowa. He was appointed associate of the U. S. Supreme Court by President Lincoln in 1862, was a member of the U. S. Electoral Commission of 1877. He was a Republican in politics.

Miller, William.—Born at Pittsfield, Mass., 1782; died in Washington Co., N. Y., 1849. A religious en-

thusiast, founder of the Millerites or Adventists. He commenced lecturing on the Millennium in 1831.

Millet, Aimé.—(1819-1891.) A French sculptor. Many of his works adorn the public buildings, parks, etc., of Paris.

Millet, Francis Davis.—An American portrait painter, born in 1846. He excels in modeling.

Millet, François.—(1642-1679.) A renowned Flemish painter.

Millet, Jean François.—(1814-1875.) A French artist, the most famous of the Barbizon school. His subjects suggested chiefly toil and poverty. His most famous painting is the "Angelus" widely known through copies. (See 3461.)

Milligan Case.—A U. S. Supreme Court case, involving the authority of the President to suspend the rights of citizens under habeas corpus proceedings. Oct. 5, 1864, during the Civil War, Milligan, a citizen of Ind., was arrested by order of Gen. Hovey, and on Oct. 21, was brought before a military commission convened at Indianapolis. He was tried, found guilty, and sentenced to be hanged for participation in rebellious schemes. By the habeas corpus act of Congress, in 1863, lists were to be furnished in each state, of persons suspected, of disloyal acts and counsels. But any such person arrested, against whom no indictment should be found by the circuit or district court, was to be set at liberty on his petition verified by oath. Milligan was not indicted by a civil court. He objected to the authority of the military commission, and sued for a writ of habeas corpus in the circuit court. The case was decided by the Supreme Court in 1866, Justice Davis, reading the opinion that the writ should be issued and the prisoner discharged. The court held that the power of erecting military jurisdiction in a state not invaded, and not a rebellion, was not vested in Congress, and that it could not be exercised in this particular case; that the prisoner, a civilian, was exempt from the laws of war and could only be tried by a jury; that the writ of habeas corpus could not be constitutionally suspended, though the privilege of that writ might be. The chief-justice and Justices Wayne, Swayne, and Miller, while concurring in the judgment of the court, made a separate statement of reasons. The decision expressly stated that conspiracies to aid rebellion were enormous crimes, and that Congress was obliged to enact severe laws to meet such a crisis.

Milliken's Bend (La.), Battle of.—General Grant, during his operations against Vicksburg (May-June, 1863) drew from the various posts in that department all the troops that could be spared to strengthen his army in the field. A strong fort at Milliken's Bend, on the Mississippi River, was manned by a small garrison, mostly negroes. June 6, Gen. McCulloch, with a force of Confederates, attempted its capture. The fort was well defended, but McCulloch might have overpowered the garrison had it not been for the timely arrival of two Union gunboats, which turned the tide of battle and the assail-

- ants were repulsed. The Federal loss was 490 and that of the Confederates about 725.
- Millionaires of Character.**—4415.
- Mills, Clark.**—Born in Onondaga Co., N. Y., 1815; died at Washington, D. C., 1883. A sculptor. Among his works are equestrian statues of Washington and Jackson at Washington.
- Mills Bill.**—A tariff bill, named from the chairman (R. Q. Mills) of the Ways and Means Committee, passed by the Democratic House in 1888, and rejected by the Republican Senate. It placed wool, hemp, flax, and lumber on the free list, and reduced duties on woolen goods, pig-iron, etc.
- Mill Springs (Ky.), Battle of.**—Near the end of 1861, the first year of the Civil War, Gen. Felix K. Zollicoffer, with a Confederate force of 5,000 men, took up a strongly intrenched position at Mill Springs, on the Cumberland River, in southeastern Ky. In Jan., 1862, Gen. George H. Thomas, with a Federal force numbering 7,000 marched to dislodge him. The Confederates advanced to meet him, and Jan. 19, an engagement took place. Thomas won a complete victory, capturing 12 cannon, 150 wagons, and 1,000 horses. The Confederates fled across the river and burned the boats to cut off pursuit. In the action the Confederates lost 350, their commander, Gen. Zollicoffer, being among the slain. The Union loss was 250.
- Mills, Roger Quarles.**—Born in Todd Co., Ky., 1832. A Democratic politician. He settled in Tex. in 1849, served as a Confederate officer in the Civil War, was a member of Congress from Tex. (1873-92), chairman of the Ways and Means Committee (1887-89), and as such introduced the Mills Bill in 1888. He represented Tex. in the U. S. Senate (1892-98).
- Millville.**—A city in Cumberland Co., N. J., on the Maurice River. It manufactures glass, cotton, etc. Pop. (1900), 10,583.
- Milman, Henry Hart.**—(1791-1868.) An English clergyman and historian. His chief works were an edition of Gibbon, and histories of Christianity during the early centuries.
- Milner, Lord Alfred,** Govt. House, Cape Town, born 1855. A Balliol man, barrister, journalist on the "Pall Mall Gazette" during the Stead régime; after three years as Financial Under Sec. in Egypt, and five as chairman of Board of Inland Revenue, was appointed governor of the Cape, and high commissioner of South Africa (1897); met President Krüger at the abortive Bloemfontein Conference, May, 1899, and was chief representative of Great Britain in the negotiations preceding the Boer War.
- Milo.**—A Greek athlete, famous for his strength, who lived about 520 B.C. He was six times victor in wrestling at the Olympian games.
- Miltiades.**—An Athenian general who died, 489 B.C. in prison, in punishment for having failed in an expedition against Paros. His fame rests upon the victory at Marathon in which he checked the advance of the Persian army under Darius.
- Milton, John.**—(1608-1674.) One of the most celebrated of English poets. In ecclesiastical affairs he was a Puritan, and after the execution of Charles I. he became Latin secretary to the commonwealth under Cromwell. Late in life he became blind and after this misfortune he dictated to his daughters his great epic, "Paradise Lost," upon which his fame chiefly rests.
- Milwaukee.**—The largest city in the state of Wisconsin, situated on Lake Michigan, 85 miles north of Chicago. Among the manufacturing interests, its beautiful cream-colored bricks are noted. Its population is largely German.
- Mindanao.**—One of the southern islands of the Philippines, ranking next in size to Luzon.
- Minerals and Metals—World's Output of (1898).**—See table on following page.
- Minersville.**—A borough in Schuylkill Co., Pa., on the west branch of the Schuylkill. Pop. (1900), 4,815.
- Minerva.**—See GREEK AND ROMAN MYTHOLOGY, 1607.
- Minister, The Young.**—4938.
- Minister's Equipment, A.**—4941.
- Ministry, The Opportunities of the Christian.**—4944.
- Mink, The.**—2438.
- Minneapolis.**—The capital of Hennepin Co., Minn., on the Mississippi River at the Falls of St. Anthony. It is the largest city in the state; is noted for its manufactures of flour and lumber; has also iron-works; is the seat of the University of Minn., and of Augsburg Theological Seminary (Lutheran). Pop. (1900), 202,718.
- Minnehaha, Falls of.**—A cascade in the Minnehaha River near Minneapolis, Minn. Height, 60 feet.
- Minnesingers (love singers).**—German lyric poets and singers of the 12th and 13th centuries; they sang chiefly of love and war, for the entertainment of the nobility, playing their own accompaniments on the viol.
- Minnesota.**—One of the North Central States of the U. S. Bounded on the north by British America, east by Wis. and Lake Superior, south by Iowa, west by the two Dakotas. The region was explored by the French in the 17th century. Minn. was formed from part of the Northwest Territory and part of the Louisiana Purchase; organized as a territory in 1849 and admitted as a state in 1858; it was the scene of the Sioux Massacre and War in 1862-63. The surface is undulating and the soil productive; it is one of the leading states in the yield of wheat; agriculture and lumbering are the chief industries. It has 80 counties; St. Paul is the capital and Minneapolis is its other large city; these cities are so near each other that they are growing together; there is the keenest rivalry between them and no doubt the time is not remote when they will be united; other leading towns are Duluth, Winona, Stillwater, Maukato and St. Cloud. Area, 83,365 sq. miles; pop. (1900), 1,751,394; called the North Star State, also the Gopher State.
- Minnesota, University of.**—A coeducational institution of learning at Minneapolis, chartered in 1838.
- Minnesota River.**—A river in Minn. which joins the Mississippi about seven miles southwest of St. Paul. Length, about 450 miles.

MINERALS AND METALS—WORLD'S OUTPUT OF (1898).—

The important figures given below show the world's output of the several metals in the latest year for which international figures are available—1898. 4,355,204 miners were engaged in the mines.

COPPER, Total (1899), 475,000 Metric Tons.*	FINE GOLD, Total (1898), 449,073 Kilos.*	IRON, † Total (1898), 34,976,233 Metric Tons.	LEAD, 789,983 Metric Tons.
United States (1899) 265,000	United States 96,993	United States 11,962,877	United States 201,395
British Empire (1898) 34,610	British Empire 151,371	British Empire 5,031,827	British Empire 55,853
Chili (1898) 23,554	Transvaal 119,136	France 1,679,300	France 16,339
German Empire (1898) 30,695	Russia 38,129	Germany 3,795,946	Germany 132,742
Spain (1898) 57,694	Mexico 12,942	Luxemburg 1,925,622	Mexico 65,004
	Total in 1899, 15,175,180 ozs.	Russia 1,868,564	Spain 277,283
	Value, \$313,315,000.	Spain 3,958,376	
PETROLEUM, 15,771,631 Metric Tons.	SALT, 11,353,173 Metric Tons.	FINE SILVER, 5,695,968 Kilos.	TIN, 77,523 Metric Tons.
United States 7,029,109	United States 2,236,910	United States 1,693,312	British Empire 49,058
British Empire 172,691	British Empire 3,047,135	British Empire 647,954	Dutch East Indies 17,957
Austria-Hungary 277,675	France 999,283	Bolivia 465,529	Bolivia 4,615
Dutch East Indies 185,405	Germany 1,370,341	Germany 480,578	Siam 4,000
Russia 7,855,582	Russia 1,526,622	Mexico 1,623,647	
ZINC, 470,994 Metric Tons.			United States 104,688
			British Empire 11,195
			Germany 154,867
			Italy 52,840
			Spain 39,934

* Metric ton=1,000 Kilos = 2,204.62125 lb. English ton = 2,240 lb.
 † The United States, Great Britain, France, and Belgium produced 34,548,900 tons of pig-iron in 1899. This total was made up as follows: United States, 13,620,703; Great Britain, 9,305,319; Germany, 8,029,305; France, 2,557,388; and Belgium, 1,036,185 tons.

Minnetonka, Lake.—A small lake about 12 miles west of Minneapolis.

Minnow, The.—See *CARP*, 2696.

Minorca.—The second largest island of the Balearic group, in the Mediterranean Sea. Capital, Fort Mahon. Area, 293 square miles.

Minotaur.—In Greek mythology, a monster represented as having the body of a man and the head of a bull.

Minot's Ledge.—A reef near the entrance of Massachusetts Bay, 15 miles southeast of Boston. It has a lighthouse.

Mint.—By an act of Congress passed Apr. 2, 1792, the first U. S. mint was established at Philadelphia. The first machinery and first metal used were imported, and copper cents were coined the following year. In 1794 silver dollars were made, and the succeeding year gold eagles. In 1835 branch mints were established at New Orleans, La., at Charlotte, N. C., and at Dahlonega, Ga.; in 1852 at San Francisco, Cal.; in 1864 at Dalles City, Ore.; and in 1870 at Carson City, Nev. The mints at Charlotte and Dahlonega were suspended in 1861, that at Dalles in 1875, that at Carson City in 1885, and that at New Orleans from 1860 to 1879. Assay offices, which were formerly considered branches of the mint, were established at N. Y. in 1834; Denver, Col., in 1864; Boise City, Idaho, in 1872, and at other places at later date.

Mint Family, The.—2903.

Minto, Earl of, Govt. House, Ottawa, Canada, born, 1848. Served with Turkish army (1877), in the Afghan War, the first Egyptian Campaign, and the Canadian Rebellion of 1885; gov.-gen. of Canada since 1898.

Minutemen.—An organized militia in the early Revolutionary days, composed of farmers, mechanics, tradesmen, etc. They were pledged to perform military duty at a minute's notice. They were provided for by the Provincial Congress of Mass., which, in 1774, voted to enroll 12,000.

Mirabeau, Comte de (GABRIEL HONORÉ RIQUETTI).—(1749-1791.) The greatest orator of the French Revolution.

Miranda Plot.—A joint scheme of citizens of the U. S. and Great Britain, about 1806, whereby, through the agitation of one Miranda, a citizen of Caracas, Venezuela, dissatisfaction was to be spread among the Spanish and French provinces. During the revolutions which it was expected would ensue, Great Britain was to obtain the West Indies, and the U. S. would secure Florida and other territory.

Mischievous Tailor and the Elephant, The.—See *ANIMAL STORIES*, 2728.

Missionary Ridge (Tenn.) Battle of.—An action of the Civil War notable for the gallantry of the assailants and the completeness of the victory. After its defeat at Chickamauga (Sept. 19-20, 1863), the Union army was for two months closely beleaguered in Chattanooga. The Confederate army under Bragg occupied a very strong fortified position, extending four miles along the crest of Missionary Ridge, and also

covering Lookout Mountain. Early in Nov., Bragg weakened his force by sending Longstreet with 16,000 men to operate against Knoxville, while the Federal army was largely augmented by the arrival of Grant and Sherman with 25,000 men from Vicksburg, and Hooker with 20,000 from the Army of the Potomac. Gen. Grant directed the operations. Nov. 24, occurred the battle of Lookout Mountain (which see) and Sherman made a vigorous but unsuccessful attempt to carry the north end of the Ridge. Nov. 25, four divisions of the Army of the Cumberland were formed for a charge and, about the middle of the afternoon, were ordered to take the line of Confederate rifle-pits skirting the foot of the Ridge. This was quickly done. The troops had no orders to proceed farther, but they found themselves exposed to a galling, plunging fire from the Confederates on the crest. They could not stay where they were, they would not retreat, and they went forward up the Ridge, with loud yells. Grant and Thomas were standing together on Orchard Knob. "Why, Thomas," exclaimed Grant in surprise, "they are going right up the Ridge!" "Well," replied "Old Pap," quietly, "let 'em go!" The Federals swept like a wave over the crest, piercing the hostile line simultaneously at three points. The Confederates at once began to crumble away and soon the whole army was in disorganized retreat. The Federals captured 40 pieces of artillery and more than 6,000 prisoners. In the operations from Nov. 24 to Nov. 29 the total Confederate loss was 9,500; that of the Federals, nearly all killed or wounded, was 5,600.

Mississippi.—One of the Southern Gulf States of the U. S. Bounded on the north by Tenn., east by Ala., south by the Gulf of Mex. and La., and west by La. and Ark. The region was visited by De Soto in 1540, which was 130 years earlier than the expedition of Marquette and La Salle down the Mississippi River; the first permanent settlement was made by the French on the site of Natchez, in 1716; the territory was ceded by France to Great Britain in 1763, and by the latter to the U. S. in 1783; Mississippi Territory was organized in 1798 and admitted as a state in 1817. Miss. seceded Jan. 9, 1861, and was one of the seven states that organized the Confederate states of America; readmitted to the Union in 1870. The people suffered much from the raids and campaigns of the Union army during the Civil War; the most notable event within its limits was the siege of Vicksburg, which Gen. Pemberton surrendered to Gen. Grant, July 4, 1863, with 30,000 prisoners. It is a purely agricultural state, cotton being the principal product; Jackson is the capital; it has no city which has a population as large as 15,000; chief towns, Vicksburg, Meridian, Natchez, Greenville, and Columbus. It has 76 counties; area, 46,810 sq. miles; pop. (1900), 1,551,270. It is called the Bayou State.

Mississippi.—The largest river of North America. Its source is in or near Lake Itasca, northern

- Minn. It traverses part of Minn.; forms the boundary between Minn., Ia., Mo., Ark., and La. on the west, and Wis., Ill., Ky., Tenn., and Miss. on the east; flows south and empties into the Gulf of Mexico by 5 mouths. It is navigable for steamboats to the Falls of St. Anthony, Minn. Its chief tributaries are the Minnesota, Des Moines, Missouri, St. Francis, Arkansas, White, and Red rivers from the west, and the Wisconsin, Rock, Illinois, Ohio, and Yazoo rivers from the east. The chief cities on its banks are St. Paul, Minneapolis, Dubuque, St. Louis, Memphis, Vicksburg, Baton Rouge, and New Orleans. Length of the Mississippi to Lake Itasca, 2,547 miles. With its chief tributary, the Missouri, it is 4,300 miles in length and drains an area of 1,726,000 square miles. The Amazon, which is without doubt the widest river in the world, is 4,000 miles long and drains 2,330,000 square miles.
- Mississippi Bubble.**—A speculative scheme formed under the leadership of John Law for paying off the national debt of France. It resulted in a financial panic in 1720.
- Mississippi River Commission.**—A board existing under the auspices of the U. S. Government, the duty of which is to devise and recommend from time to time such measures as may be necessary to maintain the safe navigability of the Mississippi River.
- Mississippi Sound.**—A part of the Gulf of Mexico lying south of Miss., and partly inclosed by a chain of islands.
- Mississippi Valley.**—The region drained by the Mississippi and its affluents, between the Alleghanies on the east and the Rocky Mountains on the west.
- Missolonghi.**—A town in the monarchy of Acarnania and Ætolia, Greece. Byron died there in 1824.
- Missoula.**—A river in western Mont., which unites with the Flathead to form Clarke's Fork.
- Missouri.**—One of the Central States of the U. S. of America. Bounded on the north by Iowa, east by Ill., Ky., and Tenn., south by Ark., west by Ind. Ter., Kan., and Neb. The region was claimed by the French by virtue of exploration; first settled at St. Genevieve about 1755; was ceded to Spain in 1763 and back to France in 1800, and was part of the Louisiana Purchase of 1803; Missouri Territory was formed in 1812 and was admitted into the Union in 1821. The state adhered to the Union during the Civil War, 1861-65, though it was claimed by the Southern Confederacy and was represented in its Congress. It furnished many volunteers for both sides, but much the larger number for the Union army. The southern half of the state was overrun by the hostile armies during the war and the people suffered great loss and damage. The principal battle fought on its soil was that of Wilson's Creek, in August, 1861, at which Gen. Nathaniel Lyon, the Union commander, was killed. The state is rich in mineral wealth, yielding iron, lead, and coal; corn, wheat, tobacco, and oats are the staple agricultural products; stock raising is a leading industry. It has 114 counties; Jefferson City is the capital and St. Louis is the chief city; other large towns are Kansas City, St. Joseph, Springfield, Sedalia, Hannibal, and Joplin. Area, 69,415 sq. miles; pop. (1900), 3,106,665.
- Missouri.**—The largest tributary of the Mississippi River. It flows through Mont. and the Dakotas, traverses Mo., and unites with the Mississippi 17 miles north of St. Louis. The chief cities on its banks are Bismarck, Yankton, Sioux City, Omaha, Council Bluffs, St. Joseph, Atchison, Leavenworth, and Kansas City. Length, 3,047.
- Missouri Compromise.**—An agreement, embodied in an act of Congress in 1820, by which, after the admission of Mo. as a slave state, slavery was forever prohibited north of 36 degrees, 30 minutes, north latitude, in the territory included in the "Louisiana Purchase." It was intended to operate in the formation of new states in the west. Thirty years later the compromise was held to be unconstitutional, and it was abrogated in 1854, by the passage of the Kansas-Nebraska bill, which removed the barrier and left the people of a territory free to decide whether it should be admitted as a state with a free or a slave constitution. This action precipitated the bitter conflict between the friends and opponents of slavery in Kan., and had much to do with bringing on the great Civil War of 1861-65.
- Mitchel, Ormsby McKnight.**—Born in Ky., 1810; died at Beaufort, S. C., Oct. 30, 1862. Before the Civil War he gained high repute as an astronomer. In 1845 he became Director of the Cincinnati observatory, and later of the Dudley observatory at Albany, N. Y. He wrote several books and treatises on astronomical science which are of great value. In 1861 he entered the Union army and engaged in the war with great enthusiasm. He was made brig.-gen. in 1861, and maj.-gen. in 1862. He commanded a division of Gen. Buell's army, and showed wonderful enterprise and ability. He was sent with his division to break the Memphis and Charleston Railroad, and swept it from Decatur, Ala., to Bridgeport, burning bridges and destroying engines and cars. He was sent to command in S. C., but was seized with Yellow fever and died as stated above.
- Mitchell, Donald Grant** (*pseudonym*, IK MARVEL).—Born at Norwich, Conn., 1822. An essayist and novelist. He graduated at Yale (1841); studied law in N. Y.; was consul at Venice (1853-55); has since lived on his farm, Edgewood, near New Haven, Conn. His works include "Reveries of a Bachelor," "Dream Life," "My Farm of Edgewood," and "Rural Studies."
- Mitchell, Elisha.**—Born at Washington, Conn., 1793; died in the Black Mountains, N. C., 1857. A chemist, surveyor, and clergyman, noted for his explorations of the mountains of N. C.
- Mitchell, Maria.**—Born at Nantucket, Mass., 1818; died at Lynn, Mass., 1889. An astronomer. She was professor of astronomy at Vassar College, Poughkeepsie, N. Y., from 1865, received

the degree of LL.D. from Dartmouth in 1852, and from Columbia in 1887; was the first woman elected to the American Academy of Arts and Sciences; was a member of several scientific associations.

Mitchell, Mrs. (LUCY MYERS WRIGHT).—Born at Urumiah, Persia, 1845; died at Berlin, Germany, 1888. An American archæologist. She wrote "A History of Ancient Sculpture."

Mitchell, Mt.—The highest mountain in the U. S. east of the Rocky Mts., situated in the Black Mts., Yancey Co., N. C. Height, 6,710. It is named from Prof. Elisha Mitchell who perished while exploring the mountain (1857).

Mitchell, Silas Weir.—(1829.) An eminent American author and physician.

Mitford, Mary Russell.—(1787-1855.) A noted English author.

Mithradates, "The Great."—Born, about 132 B.C.; died, 63 B.C. King of Pontus 120-63. One of the greatest warriors of ancient times.

Mobile.—(1) The capital of Mobile Co., Ala., on the Mobile River. It is the largest city of the state and its only seaport, has large trade in timber, naval stores, coal, etc., and exports large quantities of cotton. Pop. (1900), 38,469. (2) Mobile Bay.—An inlet of the Gulf of Mexico, in the southwestern part of Ala. Length about 36 miles. (3) Mobile Point.—A sandy point at the eastern entrance of Mobile Bay, the site of Fort Morgan.

Mobile, Capture of.—See FARRAGUT, DAVID GLASGOW, 183-185.

Mobile Bay (Ala.), Battle of.—The port of Mobile was an important one to the Confederates during the Civil War, because of the facilities it afforded for the ingress and egress of blockade runners. At no time was the blockade wholly effective, and the Confederates did more business with the outside world here than at any other port except Wilmington, N. C. The Federal government at various times considered plans for the capture of Mobile, by the reduction of its very strong defenses. These consisted of forts at several points, mounting the heaviest guns, and, in 1864, a formidable fleet of gunboats, and the powerful ironclad ram "Tennessee." The Union flag did not float over the city until at the end of the war, at the same time that Lee surrendered at Appomattox. In the summer of 1864 operations against Mobile were planned on a large scale, embracing both land and naval forces. The entrance to the bay was defended by strong forts, but it was considered feasible for ironclad vessels to "run" these batteries, as had already been done below New Orleans, at Port Hudson and at Vicksburg. Rear-admiral Farragut did this, Aug. 5, with 18 vessels, including four monitors (see FARRAGUT, DAVID GLASGOW, 179). The bay was well planted with torpedoes, and one of these sank the monitor "Tumseh," with nearly all on board. Her commander, Capt. Craven, and 113 of the crew were drowned. The loss of life on the other vessels of Farragut's fleet during the battle with the Confederate vessels in the bay was 52, with 170

wounded. All of the Confederate vessels were destroyed or captured save one, which escaped up the bay. The night after the battle Fort Powell was abandoned and blown up. Fort Gaines was surrendered the next day, and Fort Morgan was reduced a few days later. In these forts were taken 104 cannon and nearly 1,500 prisoners. The Federals now had control of Mobile Bay, but the city was still protected by strong works. It was not till April, 1865, that these were taken, by a coöperation of land and naval forces, and the city fell, after its long and stubborn resistance. In the final action the Federals lost 700 killed and wounded, and the Confederates 2,900, most of whom were prisoners. The principal defense of the city was known as Fort Blakely.

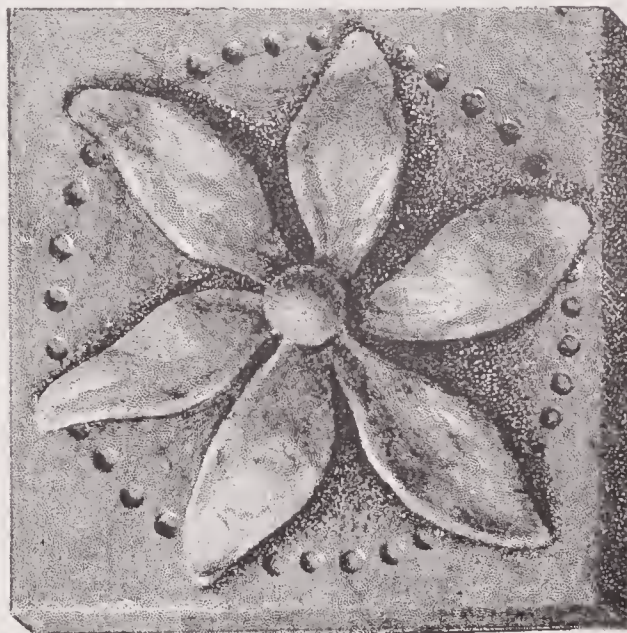
Moccasin Point (Tenn.).—A point of land formed by a sharp bend in the Tennessee River near Chattanooga, and famous during the military operations there in 1863. On it was located a powerful Federal battery, the guns of which were trained on Lookout Mountain while the latter was held by the Confederates.

Moccasin Snake, The.—See SERPENTS, 2640.

Mockernut, The.—See HICKORY, 2852.

Mocking Bird, The.—2541.

Modeling.—See HOME STUDY OF ART, 2399.



CLAY MODEL

Modeling in Clay.—3710.

Modeling in Clay.—3799.

The Plant, 3799.

Manipulation, 3800.

Elementary Forms, 3801.

Hollow Forms, 3803.

Tiles, 3804.

Clay Modeling as an Aid to Nature Study

3805.

Geometric Forms, 3810.

Conventional Forms, 3813.

Natural Forms—Advanced Work, 3816.

- Modena.**—An important city in Italy and the *Panaro*. Capital of a province of the same name.
- Modjeska, Helena.**—*Boru*, 1844. A noted Polish actress.
- Modoc Indians.**—A tribe of the *Lutuamian* family, which, with the *Klamaths*, formerly occupied the region of the *Klamath Lakes* and *Sprague River*, *Ore.*, and extended southward into *Cal.* They began attacks on the whites as early as 1847. Hostilities continued until 1864, when they ceded their lands and agreed to go on a reservation.
- Modocs.**—A tribe of North American Indians which formerly occupied the valleys of *Lost River* and its tributaries, and the shores of *Little Klamath*, *Modoc*, and *Clear lakes*. After their conflict with the U. S. in 1872-73, about 80 of the *Modocs* were removed to *Ind. Ter.* The remainder, about 140, have resided since 1869 near *Yaneks* on *Sprague River*, *Klamath reservation*, *Ore.*
- Modoc War.**—A war between the U. S. Government and the *Modoc Indians* led by *Captain Jack*. In 1872 the *Modocs* refused to go to the *Klamath reservation* in southern *Ore.*, and went to the *Lava Beds*. At a conference between *Gen. Canby* and the *Indians*, April, 1873, the former was treacherously killed. War ensued, the band surrendered, and *Captain Jack* was executed.
- Moguls.**—A Mohammedan Tartar empire in *India*.
- Mohammed, or Mahomet** ("The praised one").—The founder of Mohammedanism. *Boru* at *Mecca*, *Arabia*, about 570, died at *Medina*, *Arabia*, 632.
- Mohave Indians.**—A tribe of the *Yumans*, living along the lower *Colorado River* in *Arizona*. About a third of them are on a reservation. They number in all about 2,000.
- Mohawk Indians.**—A tribe of the *Iroquois* family. The name is said to be derived from the *Algonquin* word "maqua," meaning "bears." Early settlers found them occupying the territory now included in *N. Y.*, extending from the *St. Lawrence River* to the *Delaware River* watershed, and from the *Catskills* to *Lake Erie*. Their villages were along the *Mohawk River*. They were known as one of the *Five Nations*, and were the first tribe of that region to obtain firearms. The *Mohawks* were allies of the *English* in their wars with the *French* and *Americans*. In 1784, under *Chief Brant*, they retired to upper *Canada*.
- Mohawk River.**—A river in *N. Y.* which joins the *Hudson* 9 miles north of *Albany*. Length, about 187 miles.
- Mohegan Indians.**—A tribe of the *Algonquin* family. They once lived chiefly on the *Thames River Conn.*, and claimed territory extending into *Mass.* and *R. I.* After the destruction of the *Pequots* in 1637, they laid claim to the latter's lands. The death of *King Philip* in 1676, left them the only important body of *Indians* in southern *New England*. They finally became scattered, some of them joining the *Brotherton Indians* in *N. Y.* The *Mohegans* are often confounded with the *Mohicans* and called *River Indians*.
- Mohican Indians.**—A tribe of the *Algonquin* family. The name is interpreted both as "Wolf" and "Seaside" people. When first known to the whites, they occupied both banks of the *Hudson River*, extending from *Albany* to *Lake Champlain*. They were distinct from the *Mohegans* of the *Connecticut River*. The two tribes are usually confounded under the name of *River Indians*. They were friendly to the *English* among the *French* and *British* struggles for supremacy in *America*. They assisted the colonists during the *Revolution*.
- Mole, The.**—2434.
- Molière** (stage name for *JEAN BAPTISTE POQUELIN*).—(1622-1673.) A celebrated *French* dramatist and actor.
- Moline.**—A city in *Rock Island Co., Ill.*, on the *Mississippi River*. Pop. (1900), 17,248.
- Molino del Rey** (*Mexico*), **Battle of.**—When the fortifications of *Contreras* and *Cherubusco* had been carried, *Gen. Scott* took up his headquarters at the bishop's castle, overlooking the western approaches to the *City of Mexico*. The first formidable obstruction was by *Molino del Rey*. *Gen. Worth's* division of 3,000 men was detailed for attack upon this and its supporting fortification, *Casa de Mata*. These were stone buildings strongly fortified and ably defended, the *Mexicans* contesting every inch of ground. The attack was made on the morning of *Sept. 8, 1847*. After two hours' fighting, the works were carried and the army of *Santa Anna*, 14,000 strong, was driven back. The *Mexican* loss was 2,200 killed and wounded and about 800 prisoners. The *American* loss was 116 killed, 665 wounded, and 18 missing.
- Mollusk, The.**—2714.
- Moltke, Count Hellmuth Karl Bernhard von.**—(1800-1891.) *Prussian* field marshal. Prominent in the war of *Austria* and *Prussia* against *Denmark*, in 1864; in the *Austro-Prussian War* of 1866; and in the *Franco-German War* of 1870-71.
- Mommsen, Theodor.**—Born, 1817; famous *German* historian.
- Monetary Commission.**—Composed of bankers and other business men and financiers, appointed to aid in securing the adoption of the gold standard by the *Federal Congress*. For a history of the commission and its work, see *HANNA, HUGH H.*, 254.
- Money.**—The term "Almighty Dollar" seems to have been first used by *Washington Irving*. *Skins*, *cattle*, *shells*, *corn*, *pieces of cloth*, *mats*, *salt*, and many other commodities have at different times and places been used as money. The largest circulation of paper money is that of the U. S., being \$700,000,000; while *Russia* has \$670,000,000. Gold was first discovered in *California*, in 1848. Money simply means a common medium of exchange. The first currency used in this country was the *Indian wampum*.

National banks were first established in this country in 1816.

The highest denomination of U. S. legal tender notes is \$10,000.

Sterling signifies money of the legalized standard of coinage of Great Britain and Ireland. The term, according to one theory, is a corruption of Easterling—a person from North Germany, on the continent of Europe, and therefore from the east in geographical relation to England. The Easterlings were in-

genious artisans who came to England in the reign of Henry III., to refine the silver money, and the coin they produced was called moneta Esterlingorum—the money of the Easterlings.

The continental money consisted of bills of credit issued by Congress during the War of Independence, which were to be redeemed with Spanish milled dollars. \$200,000,000 worth were issued but they were never redeemed and caused much suffering.

Money, Value of Foreign.—

COUNTRY.	Standard.	Monetary Unit.	Value in U. S. Gold Dollar.	Coins.	
Argentine Rep....	Gold..	Peso.....	\$0.96,5	Gold: argentine (\$4.82,4) and ½ argentine. Silver: peso and divisions.	
Austria-Hungary..	Gold..	Crown.....	.20,3	Gold: former system—4 florins (\$1.92,9), 8 florins (\$3.85,8), ducat (\$2.28,7), and 4 ducats (\$9.14,9). Silver: 1 and 2 florins. Gold: present system—20 crowns (\$4.05,2) and 10 crowns (\$2.02,6).	
Belgium.....	Gold..	Franc.....	.19,3	Gold: 10 and 20 francs. Silver: 5 francs.	
Bolivia.....	Silv'r*	Boliviano.....	.42,8	Silver: boliviano and divisions.	
Brazil.....	Gold..	Milreis.....	.54,6	Gold: 5, 10, and 20 milreis. Silver: ½, 1, and 2 milreis.	
Canada.....	Gold..	Dollar.....	1.00		
Central America..	Silver	Peso†.....	.45,1	Silver: peso and divisions.	
Chile.....	Gold..	Peso.....	.42,8	Gold: escudo (\$1.82,5), doubloon (\$3.65), and condor (\$7.30). Silver: peso and divisions.	
China.....	Silver	Tael... {	Shanghai.....	.63,2	
			Haikwan.....	.70,4	
			Tientsin.....	.67,0	
			Canton.....	.68,9	
Colombia.....	Silver	Peso.....	.42,8	Gold: condor (\$9.64,7) and double-condor. Silver: peso.	
Costa Rica.....	Gold..	Colon.....	.46,5	Gold: 2, 5, 10, and 20 colons (\$9.30,7). Silver: 5, 10, 25, and 50 centimos.	
Cuba.....	Gold..	Peso.....	.92,6	Gold: doubloon (\$5.01,7); Alphonse (\$4.82,3). Silver: peso.	
Denmark.....	Gold..	Crown.....	.26,8	Gold: 10 and 20 crowns.	
Ecuador.....	Silver	Sucre.....	.48,7	Gold: 10 sucres (\$4.86,65). Silver: sucre and divisions.	
Egypt.....	Gold..	Pound (100 piasters)	4.94,3	Gold: pound (100 piasters), 5, 10, 20, and 50 piasters. Silver: 1, 2, 5, 10, and 20 piasters.	
Finland.....	Gold..	Mark.....	.19,3	Gold: 20 marks (\$3.85,9), 10 marks (\$1.93).	
France.....	Gold..	Franc.....	.19,3	Gold: 5, 10, 20, 50, and 100 frs. Silver: 5 frs.	
Germany.....	Gold..	Mark.....	.23,8	Gold: 5, 10, and 20 marks.	
Great Britain.....	Gold..	Pound sterling.....	4.86,6½	Gold: sovereign (pound sterling) and ½ sovereign.	
Greece.....	Gold..	Drachma.....	.19,3	Gold: 5, 10, 20, 50, and 100 drachmas. Silver: 5 drachmas.	
Hayti.....	Gold..	Gourde.....	.96,5	Gold: 1, 2, 5, and 10 gourdes. Silver: gourde and divisions.	
India.....	Gold..	Pound sterling †	4.86,6½	Gold: sov. (\$4.86,65). Sil.: rupee and div'ns.	
Italy.....	Gold..	Lira.....	.19,3	Gold: 5, 10, 20, 50, and 100 lire. Silver: 5 lire.	
Japan.....	Gold..	Yen.....	.49,8	Gold: 1, 2, 5, 10, and 20 yen. Silver: 10, 20, and 50 sen.	
Mexico.....	Silver	Dollar.....	.46,4	Gold: dollar (\$0.98,3), 2½, 5, 10, and 20 dollars. Silver: dollar (or peso) and divisions.	
Netherlands.....	Gold..	Florin.....	.40,2	Gold: 10 florins. Silver: ½, 1, and 2½ florins.	
Newfoundland....	Gold..	Dollar.....	1.01,4	Gold: 2 dollars (\$2.02,7).	
Norway.....	Gold..	Crown.....	.26,8	Gold: 10 and 20 crowns.	
Peru.....	Gold..	Sol.....	.48,7	Gold: libra (\$4.86,65). Silver: sol and div'ns.	
Portugal.....	Gold..	Milreis.....	1.08	Gold: 1, 2, 5, and 10 milreis.	
Russia.....	Gold..	Ruble.....	.51,5	Gold: imperial (\$7.71,8) and ½ imperial, 7½ rubles (\$3.86). Silver: ¼, ½, and 1 ruble.	
Spain.....	Gold..	Peseta.....	.19,3	Gold: 25 pesetas. Silver: 5 pesetas.	
Sweden.....	Gold..	Crown.....	.26,8	Gold: 10 and 20 crowns.	
Switzerland.....	Gold..	Franc.....	.19,3	Gold: 5, 10, 20, 50, & 100 francs. Silver: 5 fr's.	
Turkey.....	Gold..	Piaster.....	.04,4	Gold: 25, 50, 100, 250, and 500 piasters.	
Uruguay.....	Gold..	Peso.....	1.03,4	Gold: peso. Silver: peso and divisions.	
Venezuela.....	Gold..	Bolivar.....	.19,3	Gold: 5, 10, 20, 50, and 100 bolivars. Silver: 5 bolivars.	

* The coins of silver-standard countries are valued by their pure silver contents, at the average market price of silver for the three months preceding the date of this circular. † Not including Costa Rica. ‡ The sovereign is the standard coin of India, but the rupee (\$0.32,4) is the money of account, current at 15 to the sovereign.

TABLE SHOWING THE VALUE OF FOREIGN COINS AND PAPER NOTES IN AMERICAN MONEY BASED UPON THE VALUES EXPRESSED IN THE FOREGOING TABLE.

NUMBER	British £ Sterling.	German Mark.	French Franc, Italian Lira.	Chinese Tael (Shanghai).	Dutch Florin.	Indian Rupee.	Russian Gold Ruble.	Austrian Crown.
1	\$ 4.86,6½	\$ 0.23,8	\$ 0.19,3	\$ 0.63,2	\$ 0.40,2	\$ 0.32,4	\$ 0.51,5	\$ 0.20,3
2	9.73,3	0.47,6	0.38,6	1.26,4	0.80,4	0.64,8	1.03	0.40,6
3	14.59,9½	0.71,4	0.57,9	1.89,6	1.20,6	0.97,2	1.54,5	0.60,9
4	19.46,6	0.95,2	0.77,2	2.52,8	1.60,8	1.29,6	2.06	0.81,2
5	24.33,2½	1.19	0.96,5	3.16	2.01	1.62	2.57,5	1.01,5
6	29.19,9	1.42,8	1.15,8	3.79,2	2.41,2	2.04,4	3.09	1.21,8
7	34.06,5½	1.66,6	1.35,1	4.42,4	2.81,4	2.36,8	3.60,5	1.42,1
8	38.93,2	1.90,4	1.54,4	5.05,6	3.21,6	2.59,2	4.12	1.62,4
9	43.79,8½	2.14,2	1.73,7	5.68,8	3.61,8	2.91,6	4.63,5	1.82,7
10	48.66,5	2.38	1.93	6.32	4.02	3.24	5.15	2.03
20	97.33	4.76	3.86	12.64	8.04	6.48	10.30	4.06
30	145.99,5	7.14	5.79	18.96	12.06	9.72	15.45	6.09
40	194.66	9.52	7.72	25.28	16.08	12.96	20.60	8.12
50	243.32,5	11.90	9.65	31.60	20.10	16.20	25.75	10.15
100	486.65	23.80	19.30	63.20	40.20	32.40	51.50	20.30

Money and Banking, Elements of.—4163.

"Monitor," The.—The first war vessel, the armament of which was operated with a revolving iron turret. Its name was given to this class of vessels, of which many were added to the U. S. navy after the first had achieved its success. For a description of the original "Monitor," and an account of her battle with the Confederate steamer "Merrimac," the first iron-plated war vessel, in Hampton Roads, early in 1862, see sketch of her inventor and builder, JOHN ERICSSON, 174-178.

Monkey, The.—2451.

Monkey, The.—See KEEPING OF PETS, 2325.

Monmouth.—The capital of Warren Co., western Ill.; the seat of Monmouth College (United Presbyterian). Pop. (1900), 7,460.

Monmouth (N. J.), Battle of.—An important conflict of the Revolutionary War, fought during the afternoon of June 28, 1778, at Wenrock Creek, Monmouth Co., N. J. Gen. Washington commanded the Americans and Sir Henry Clinton, the British. June 18, Clinton left Philadelphia for New York with 11,000 men and a large supply train. Washington pursued him with about 20,000 men, and after some skirmishing, a general battle occurred. The British were defeated and drew off under cover of night, leaving 300 dead on the field. The Americans lost 228, 70 of whom were killed.

Monocacy (Md.), Battle of.—When Gen. Early with 20,000 Confederates, emerged from the Shenandoah Valley, in the summer of 1864, and advanced toward Washington, a Federal force 7,000 strong was hastily collected and sent westward, under Gen. Lew Wallace, to impede his progress. Early was encountered at Monocacy and a sharp engagement took place, lasting eight hours. Wallace was at length overpowered by largely superior numbers, but his command rendered a valuable service in delaying the advance of Early, when every hour was precious to summon troops for the defense of Washington. The Federal loss was nearly 2,000, of whom 1,200 were captured; that of the Confederates was 700.

Monroe.—The capital of Monroe Co., Mich., on the Raisin River. Pop. (1900), 5,043.

Monroe, James.—Fifth President; sketch of, 429.

Monroe Doctrine.—After the overthrow of Napoleon, France, Russia, Prussia, and Austria, formed the so-called Holy Alliance, in Sept., 1815, for the suppression of revolutions within each other's dominions and for perpetuating peace. The Spanish colonies in America having revolted, it was believed that this alliance contemplated their subjugation, although the U. S. had acknowledged their independence. To forestall such a movement the Monroe Doctrine was promulgated. (See MONROE, JAMES, 429.)

Montaigne, Michel Eyquem de.—(1533-1592.) Famous French essayist.

Montana.—One of the Western states of the U. S. of America, and one of the largest in the Union, being about 18 times as large as Mass. Bounded on the north by Canada, east by the two Dakotas, south by Wyo. and Id., west by Id. It was part of the Louisiana Purchase, and the larger portion of it was for a time included in the Territory of Neb.; Mont. Ter. was formed in 1864, and was admitted as a state in 1889. The surface is greatly diversified, much of it being mountainous, with fine plateaus and fertile valleys admirably adapted to grazing; mining and wool growing are the chief industries; the metal products are chiefly copper, gold, and silver. Helena is the capital, and other leading towns are Butte, Great Falls, Missoula, and Anaconda; has 24 counties; area, 146,080 sq. miles; pop. (1900), 243,329. Called the Sage Brush State.

Montanes, Juan Martinez.—3581.

Montauk Point.—The easternmost point of Long Island, N. Y., where the U. S. troops were encamped upon their return from Cuba in 1898.

Montauks.—A tribe of North American Indians, formerly occupying the eastern end of Long Island.

Mont Blanc.—The highest mountain of the Alps, situated in the department of Haute-Savoie, France, and Piedmont, Italy. Height, 15,781 feet.

- Mont Cenis.**—A mountain pass of the Graian Alps, between France and Italy; famous for its tunnel.
- Montclair.**—A township in Essex Co., N. J. Pop. (1900), 13,962.
- Monte Carlo.**—A winter health-resort noted for its gambling operations. It is situated on the promontory of Monaco, 9 miles northeast of Nice, France.
- Montefiore, Sir Moses Haim.**—(1784-1885.) An Anglo-Jewish philanthropist. Born at Leghorn, Italy, he removed to London where he acquired a large fortune as a stockbroker. Retiring from business in 1824 he devoted his wealth and his time for the remainder of his life to improving the condition of the Jews.
- Montenegro.**—A principality of Europe bordering on the Adriatic Sea. The surface is mountainous and its chief industry is cattle raising. For more than four centuries it has been almost continuously at war with Turkey. Area, about 3,630 square miles. Pop. about 240,000.
- Monterey.**—A city of Mexico famous for its capture in 1846 by the United States troops under General Taylor.
- Monterey.**—A village in Monterey Co., Cal., on the Bay of Monterey. It is a noted winter and health resort. Pop. (1900), 3,420.
- Monterey (Mexico), Battle of.**—The Mexican army under Arista, driven across the Rio Grande, took refuge in Matamoros. Gen. Taylor, receiving reinforcements, demanded the surrender of the city, but Arista, unable to hold it, retreated to Monterey. Aug. 18, 1846, Taylor with a force of 6,600 advanced and Sept. 19, encamped in sight of Monterey. The city was strongly fortified and garrisoned by 10,000 Mexicans, mostly regulars under Gen. Ampudia. The attack was begun by the Americans, Sept. 21, and on the following day the city was forced, the Mexicans stubbornly retreating from square to square. The fighting continued during the 22d and 23d, when Gen. Ampudia surrendered the place and was allowed to retire with his army.
- Montesquieu, Baron de la Brède et de.**—(1689-1755.) A famous French statesman and author. He was received into the Academy in 1728.
- Montevideo.**—Capital of Uruguay and an important commercial center with a population of about 250,000.
- Montezuma.**—(1477-1520.) An Aztec warrior who ruled over Mexico at the time of the Spanish conquest under Cortés. He was seized by the invaders and held as a hostage. While counseling his people to avoid violence he was struck by stones thrown by the mob, and died from the wounds. The Indians have since regarded him as a god.
- Montfort, Simon of.**—(1208-1265.) An English general and statesman. Through his wife Eleanor he became earl of Leicester. In 1240 was a prominent crusader. He was a leader of the barons in the quarrel with King Henry III., and is popularly regarded as the "father of parliament."
- Montgolfier (*môn-gol-fyâ'*).**—(1745-1799.) A French inventor, who collaborated with his brother in the construction of an air balloon for which achievement both brothers were elected corresponding members of the Academy.
- Montgomery.**—The capital of Ala., and of Montgomery Co., on the Alabama River. It has a flourishing trade in cotton. Pop. (1900), 30,346.
- Montgomery Charter.**—A charter granted to the city of New York, by John Montgomery, under George II., dated Jan. 15, 1730.
- Monticello.**—The name given to the home of Thomas Jefferson, near Charlottesville, Va. (See JEFFERSON, THOMAS, 332-338.)
- Montreal.**—The largest city and chief commercial center of Canada; situated on Montreal Island in the province of Quebec. Pop. (1901), 267,730.
- Montreal (Canada), Capture and Loss of.**—After the taking of Ticonderoga and Crown Point, Ethan Allen, Philip Schuyler, Benedict Arnold, and other Americans were anxious to invade Canada and endeavor to secure the coöperation of the Canadians with the colonies. In June, 1775, the Continental Congress gave Gen. Schuyler discretionary power to proceed against Montreal. He sent Gen. Montgomery with 3,000 men down Lake Champlain. Gen. Carleton with 500 British was forced to surrender Nov. 13. Eleven vessels also fell into Montgomery's hands. Carleton escaped to Quebec. Benedict Arnold with 1,200 men had been ordered to proceed by way of the Kennebec and Chaudière rivers, and coöperate with Montgomery before Quebec. The expedition against the latter city proved disastrous. Three brigades of infantry, besides artillery, stores, and ammunition having arrived from England, the Americans were forced to retire to Lake Champlain.
- Monument.**—The highest monument in the world is the Washington monument, being 555 feet. The highest structure of any kind is the Eiffel Tower, Paris, finished in 1889, and 989 feet high.
- Monumental City.**—A name given to the city of Baltimore, Md., because of its many public monuments, of marble and granite.
- Moody, Dwight Lyman.**—Born at Northfield, Mass., 1837; died, 1899. An evangelist. He was engaged in missionary work in Chicago about 1856; conducted revival meetings with Ira D. Sankey in the U. S., and in Great Britain; established a school for Christian workers in Northfield, and a Bible Institute in Chicago.
- Moon, The.**—2983.
- Moore, Alfred.**—Born in Brunswick Co., N. C., 1755; died at Belfont, N. C., 1810. A jurist, associate-justice of the U. S. Supreme Court (1799-1805).
- Moore, Clement Clarke.**—Born at N. Y., 1779; died at Newport, R. I., 1863. A scholar and poet. In 1818 he endowed the General Theological Seminary (Protestant Episcopal) on condition that its buildings should be erected on a part of his property in Chelsea Village (9th and 10th Aves., and 20th and 21st Sts.) He was professor of biblical learning there, and afterward of Oriental and Greek literature (1821-50). He published

- "Hebrew and Greek Lexicon," "Poems," and was the author of the verses "'Twas the night before Christmas."
- Moore, George Henry.**—Born at Concord, N. H., 1823; died at N. Y., 1892. A historical writer, son of J. B. Moore. He became superintendent of the Lenox Library in N. Y. in 1872. His works include "Notes on the History of Slavery in Mass.," and "History of the Jurisprudence of N. Y."
- Moore, Jacob Bailey.**—Born at Andover, N. H., 1797; died at Bellows Falls, Vt., 1853. A historian. His specialty was the history of N. H.
- Moore, Sir John.**—(1761-1809.) British general, active in the American Revolution; also at Corsica, 1793-94; and Portugal, 1808; killed at the battle of Corunna.
- Moore, Thomas.**—(1779-1852.) Celebrated Irish poet.
- Moors.**—A dark-colored race dwelling chiefly in northern Africa. They are a mixture of half a dozen different peoples, the ancient Mauri and the Arabs predominating, from the former of whom they derive their name. Near the close of the Middle Ages they overran Spain, and in Spanish history the words Moors, Arabs, and Saracens, are practically synonymous. They are fine specimens of physique, but are characterized by voluptuousness and cruelty.
- Moose, The.**—See DEER, 2416.
- Moosehead, Lake.**—The largest lake in Me., and the source of the Kennebec River. Length, about 35 miles. Greatest breadth, about 10 miles.
- Moosilauke.**—A mountain in Benton, N. H.; height 4,810 feet.
- Moran, Edward.**—Born at Bolton, England, 1829. An English-American marine and figure painter. He came to America in 1844.
- Moran, Leon.**—Born at Philadelphia in 1863. A marine and figure painter, son of Thomas and pupil of Edward Moran.
- Moran, Percy.**—Born at Philadelphia in 1862. A *genre* painter, son of Thomas and pupil of Edward Moran.
- Moran, Peter.**—Born at Bolton, England, 1842. An English-American painter of landscape and animals, brother and pupil of Edward and Thomas Moran.
- Moran, Thomas.**—Born at Bolton, England, 1837. An English-American landscape-painter, brother and pupil of Edward Moran. He came to America in 1844. Many of his subjects are from Yellowstone Park and from Mexico.
- Moravia.**—A crown-land of the Cisleithan division of Austria-Hungary.
- More, Hannah.**—(1745-1833.) A noted English writer on religious topics.
- More, Sir Thomas.**—(1478-1535.) English philosopher and statesman; executed on Tower Hill. He is known chiefly at the present time as the author of "Utopia."
- Moreau, Jean Victor.**—(1761-1813.) Famous French general, distinguished in the Napoleonic wars.
- Moretto.**—3443.
- Morey Letter, The.**—A letter forged in the name of J. A. Garfield, favoring Chinese cheap labor. It was published at New York in Oct., 1880, shortly before the presidential election, and addressed to a fictitious H. L. Morey.
- Morgan, Daniel.**—Born in N. J., 1736; died at Winchester, Va., 1802. A Revolutionary general. He served with distinction in the expedition led by Arnold against Quebec (1775-76); commanded the riflemen at Saratoga in 1777; and defeated Tarleton at Cowpens in 1781. He rose to the rank of maj.-gen.
- Morgan, Edwin Dennison.**—Born at Washington, Mass., 1811; died at New York, 1883. A merchant and politician. He was governor of N. Y. (1859-62), and U. S. senator from N. Y. (1863-69).
- Morgan, George Washbourne.**—(1823-1892.) A distinguished Anglo-American organist.
- Morgan, John Hunt.**—Born at Huntsville, Ala., 1826; killed at Greenville, East Tennessee, Sept. 4, 1864. He was a dashing partisan cavalry commander, on the Confederate side, during the Civil War. He was a terror to the Union soldiers in Ky. and Tenn., by reason of his frequent "raids" upon their communications and depots of supply. His soldiers had the spirit of their leader, and they were always ready to fight or ride. Morgan's men made frequent captures of prisoners, pouring upon isolated bodies with irresistible fury. It has been stated, and is probably true, that during two years Morgan's men took prisoners to the number of three times their own strength. Morgan's raid through southern Ind. and Ohio, in 1863, proved fatal, resulting in the almost total destruction of his command. Morgan, with what remained of his force, was captured, and he and a large number of his officers were confined in the Ohio penitentiary at Columbus. By means of a tunnel under the wall, Morgan escaped and made his way into Ky. He assembled another force and resumed operations, but on the night of Sept. 4, 1864, was surrounded in a house at Greenville, by a force of U. S. Cavalry under Gen. Gillem. Morgan attempted to escape by flight, but was shot in the garden. (See MORGAN'S RAID.)
- Morgan, Lewis Henry.**—Born near Aurora, N. Y. 1818; died at Rochester, N. Y., 1881. An ethnologist and archaeologist. Among his writings are "League of the Iroquois," and "Systems of Consanguinity and Affinity of the Human Family."
- Morgan, William.**—Died, 1826. A mechanic of Batavia, N. Y., alleged to have been abducted and killed by Free Masons for revealing their secrets.
- Morgan's Raid.**—One of the exciting episodes of the Civil War. John H. Morgan, of Ky., was a very enterprising leader of Confederate cavalry, whose courage, daring and ceaseless activity made his name a terror to Union soldiers in Ky. and Tenn. His frequent and usually successful raids, by which supplies were destroyed and communications broken, caused great annoyance to the Federal army in that department. Coincident with the advance of Lee's army into Pennsylvania, in the latter part of June, 1863, Morgan planned an expedition north of the Ohio River from Ky. He was di-

- rected to coöperate with Gen. Buckner, who commanded a Confederate force in eastern Tennessee and was preparing for a campaign in Ky., with Louisville as his objective point. Buckner's contemplated movement was abandoned, by reason of the advance of Rosecrans from Murfreesboro, but Morgan determined to make his projected "raid." With about 3,000 cavalry he crossed the Ohio River into Ind., above Louisville, and turned eastward. He rode through southern Ind. and Ohio, burning bridges, cutting railroads, taking horses and such supplies as his men needed. The people of that region were thrown into a panic. Bodies of "home guards" endeavored to stay Morgan's progress but they were quickly brushed away and the daring troopers swept on their course. What Morgan's specific object was is not clear; if he had one it was defeated. He passed through the outskirts of Cincinnati, looting stores and creating among the people the wildest consternation. Without attempting to capture the city he continued his eastward course. Bodies of Federal cavalry were hurried to the scene and Morgan found himself harassed in front, flank, and rear by soldiers who knew how to fight. Soon after passing Cincinnati, Morgan determined, if possible, to save his command by recrossing the Ohio River into Ky. He reached the river at Buffington Ford, July 19, but the Federal forces compelled him to give battle. The action was disastrous to Morgan, who lost nearly 1,000 men, of whom 800 were captured. Some 400 succeeded in crossing the river, and with the remnant of his command, hourly growing less by capture, Morgan endeavored to escape to the northeastward. In Columbiana County, Ohio, he found himself surrounded by Federal cavalry and surrendered. During his movement through Ind. and Ohio, more than 2,200 of his men were killed or captured. Morgan and his officers were confined in the Ohio penitentiary.
- Morley, Rt. Hon. John, M.P.**, London, born, 1839; as man of letters he stands alone among present day writers; was formerly editor of the "Fortnightly," "Pall Mall Gazette," and "Macmillan's Magazine"; has written critical biographies of Voltaire and his contemporaries, and of Burke, Cobden, etc.; as politician was twice Chief Secretary for Ireland, assisting in pacification of the country; is engaged in writing Mr. Gladstone's life.
- Mormons.**—A religious body founded in the United States in 1830, by Joseph Smith. The practice of polygamy is one of the distinguishing features of the organization.
- Morocco.**—A country in northwestern Africa, bounded on the north by the Mediterranean Sea, east by Algeria, south by the Desert of Sahara, west by the Atlantic Ocean. The Atlas Mountains traverse the country from west to east. The government is administered by a sultan who has despotic power. The religion is chiefly Mohammedan. Area, 170,000 sq. miles; pop., about 8,000,000.
- Moroni.**—3443.
- Morphy, Paul Charles.**—Born at New Orleans, 1837; died there, 1884. A distinguished chess-player.
- Morrill, Justin Smith.**—Born at Strafford, Vt., 1810; died at Washington, D. C., 1898. A Republican politician. He was a member of Congress from Vt. (1855-67), and occupied a seat in the U. S. Senate (1867-98). The so-called Morrill tariff was reported by him in the House in 1861.
- Morrill, Lot Myrick.**—Born at Belgrade, Me., 1813; died at Augusta, Me., 1883. A politician. He was governor of Me. (1858-60), senator from Me. (1861-76), and Secretary of the Treasury (1876-77).
- Morris.**—The capital of Grundy Co., Ill. Pop. (1900), 4,273.
- Morris, Clara.**—Born at Cleveland, Ohio, 1846. A noted actress. She was leading woman at Wood's Theatre, Cincinnati, in 1869; went to New York in 1870; married Fred C. Harriott in 1874. She was most successful in emotional rôles.
- Morris, George Pope.**—Born at Philadelphia, 1802; died at New York, 1864. A journalist and poet. With Samuel Woodworth, he founded the New York "Mirror" in 1823 (discontinued in 1842); with N. P. Willis, the "New Mirror" in 1843, and shortly after the "Evening Mirror." In 1845 he founded the "National Press." Its name was changed in a few months to the "Home Journal." He edited this with Willis until shortly before his death. He wrote "Briarcliff," edited "American Melodies," and with N. P. Willis, "The Prose and Poetry of America." Among his best-known poems are "Woodman, Spare That Tree," and "My Mother's Bible."
- Morris, Gouverneur.**—Born at Morrisania, N. Y., 1752; died there, 1816. A statesman. He was a member of the Continental Congress; one of the committee on drafting the Constitution in 1787; U. S. minister to France (1792-94); and U. S. senator from N. Y. (1800-03).
- Morris, Lewis.**—Born at Morrisania, N. Y., 1726; died there, 1798. A patriot, brother of Gouverneur Morris, and one of the signers of the Declaration of Independence.
- Morris, Sir Lewis.**—Born 1832. An English poet. Best known work the "Epic of Hades."
- Morris, Robert.**—Statesman and financier; sketch of, 436.
- Morristown.**—The capital of Morris Co., N. J., on the Whippany River. Washington had his headquarters there in the winters of 1776-77, and 1779-80. Pop. (1900), 11,267.
- Morse, Edward Sylvester.**—Born at Portland, Me., 1838. A zoölogist. He was assistant at the Lawrence Scientific School, Harvard, until 1862; established the "American Naturalist" at Salem about 1866, founded the Peabody Academy of Sciences there, of which he was curator and president in 1881; was professor of comparative anatomy and zoölogy later in the Imperial University of Tokio; was made president in 1885 of the American Association for the Advancement of Science. His writings include "First Book in Zoölogy" and "Japanese Homes."

Morse, Jedidiah.—Born at Woodstock, Conn., 1761; died at New Haven, Conn., 1826. A geographer and Congregational divine, author of a series of geographies and gazetteers.

Morse, Samuel Findley Breese.—Inventor and perfecter of the telegraph; sketch of, 439.

Morte D'Arthur.—See ARTHURIAN LEGEND, 1792.

Mortgage.—A conditional conveyance of property to become void upon the fulfilment of the condition.

Morton, Levi Parsons.—Born at Shoreham, Vt., 1824. A banker and politician, minister to France (1881-85), vice-president of the U. S. (1889-93), and governor of N. Y. (1895-97).

Morton, Nathaniel.—Born, about 1613; died at Plymouth, Mass., 1685. A historian, compiler of "New England's Memorial."

Morton, Oliver Perry.—Born in Wayne Co., Ind., 1823; died at Indianapolis, Ind., 1877. A statesman. He was governor of Ind. (1861-67); U. S. senator (Republican) from Ind. (1866-77), and a member of the Electoral Commission (1877).

Morton, William Thomas Green.—Born at Charlton, Mass., 1819; died at New York, 1868. A noted dentist. He first administered sulphuric ether as an anesthetic to a patient of his own in 1846; obtained a patent for its use under the name "letheon" in the same year; on Oct. 16, 1846, administered ether to a patient in the Massachusetts General Hospital at Boston, and Dr. John C. Warren painlessly removed a vascular tumor from the man's neck. Several claimants opposed his right of discovery, notably Dr. Charles Thomas Jackson and Dr. Horace Wells. In 1852 the French Academy of Sciences investigated the matter, and decreed one of the Montyon prizes of 2,500 francs to Dr. Jackson for the discovery of etherization, and the similar award to Dr. Morton for the application of the discovery to surgical operations.

Moscow.—Capital of the province of Moscow, formerly capital of Russia, and still the second capital and the place of coronation and the seat of the ecclesiastical government. It is the most important railway center of Russia. The city is built around the Kremlin as its center, which is a large collection of buildings, including fortress, citadel, palace, cathedral, etc. Moscow has been destroyed by fire many times, the last time being in 1812 when the city was burned by the Russians in order to escape capture by Napoleon. In 1703 Peter the Great removed his capital to St. Petersburg, 400 miles to the northwest. Present pop., about 1,000,000.

Moses and Aaron (Arabic Legend).—1457.

Mosquito, The.—2755.

Mosses.—2929.

Moth.—A fairy in Shakespeare's "A Midsummer Night's Dream."

Moth, The.—2790.

Mother Goose.—The name associated with the famous nursery rhymes; according to some authorities, a Mrs. Goose, mother-in-law of Thomas Fleet, an early Boston publisher, who sang the verses to her grandchildren. Other writers discredit this story.



LITTLE JACK HORNER

Mother of Presidents.—A name sometimes applied to Va., the native state of Washington, Jefferson, Madison, Monroe, W. H. Harrison, Tyler, and Taylor.

Motley, John Lothrop.—Sketch of, 448.

Mott, Mrs. (Lucretia Coffin).—Born at Nantucket, Mass., 1793; died 1880. A social reformer and preacher in the Society of Friends. She was an abolitionist, a woman suffragist, and an advocate of universal peace.

Mott, Valentine.—Born at Glen Cove, L. I., 1785; died at New York, 1865. A surgeon known as a successful operator. He translated "Velpeau's Operative Surgery," and wrote "Travels," "Mott's Cliniques," etc.

Moulton, Mrs. (Ellen Louise Chandler).—Born at Pomfret, Conn., 1835. A novelist and poet. She married William U. Moulton in 1855. Among her works are "This, That, and the Other," "Juno Clifford," and "Some Women's Hearts."

Moultrie, William.—Born in S. C., 1731; died at Charleston, S. C., 1805. A Revolutionary general. He repulsed an attack on Sullivan's Island (where Fort Moultrie now stands) in 1776; defended Charleston in 1779; was gov. of S. C. 1785-87 and 1794-96.

Mound Builders.—A prehistoric race of Americans who inhabited the valleys of the Ohio and Mississippi rivers. They are so named because the only traces of their existence are found in mounds of earth formed in regular geometrical shapes, containing ashes, stone and bronze implements, and weapons. Some of these mounds seem to have been simply places of sepulture, while others show unmistakable evidences of having been erected as fortifications. The race probably became extinct only a few generations before the discovery of America, as De Soto found tribes of Southern Indians who built mounds and possessed other characteristics of the extinct race. They belonged distinctly to the Indian race and to the Stone Age.

Mound City.— A name given to St. Louis.

Moundsville.— The capital of Marshall Co., W. Va., on the Ohio River. It is so named from a notable prehistoric mound in its vicinity. Pop. (1900), 5,362.

Mountain Ash, The.— See APPLE, 2842.

Mountain-Laurel, The.— 2890.

Mountain Meadows Massacre.— In 1857 about 120 non-Mormon emigrants, men, women, and children, were attacked and massacred in Southern Utah. It was believed to have been the work of Mormons, who were extremely jealous of the encroachments of the "Gentiles." It is a singular fact that in 1877, after twenty years had elapsed, John D. Lee, a Mormon elder, was arrested, tried, convicted, and executed for participation in the slaughter at Mountain Meadows.

Mountains, Accurate Method of Measuring Them.— There are three ways of accomplishing this measurement, so far as their height is concerned, namely: by the barometer, by observation of the atmospheric pressure, by observation of the boiling point of water, and by calculation from data supplied by accurate surveying instruments, the necessary formulæ being supplied by trigonometry. This last plan, known as triangulation, is by far the most accurate method. The first method is based on the fact that the atmosphere is densest at the surface of the earth, having there to support the weight of the whole column of air above it, and the decrease in pressure being known by the barometer enables the observer, after due allowances, according to temperature, to work out the height of the mountain. The second method of observing the boiling point of water by the thermometer is based on the well-known fact that water boils at 212° Fahr., at the level of the sea, or at a pressure of 30 in. of mercury; and as the relation between the pressure and the boiling point is known exactly, the height can be measured in this way more or less accurately. Triangulation is the name applied to the process of calculation by measuring the angles of triangles. The angles having been measured by the theodolite, and

knowing them and one side, trigonometry enables the surveyor to calculate the other two. Measuring by this method is done with wonderful correctness. Two instances of this accuracy are given in Thornton's "Physiography," one one of a plain and the other of a mountain. The length of Salisbury Plain was ascertained with a result which was less than 5 in. from the measured value. The height of Ben-Macdhui was calculated to be 4,295.6 ft., and this height, when checked, proved to be within 1½ in.

Mountain Tea.— 2893.

Mt. Auburn.— A noted cemetery in Cambridge and Watertown, Mass.

Mount Desert.— An island in the Atlantic belonging to Hancock Co., Me., about one mile from the mainland. Its most noted summer resort is Bar Harbor. Highest point about 1,500 feet above the sea level.

Mount Holyoke College.— An institution of learning for women at South Hadley, Mass., founded by Mary Lyon, and opened in 1837.

Mount Pleasant.— The capital of Henry Co., Iowa; the seat of German College and Iowa Wesleyan University (both Methodist). Pop. (1900), 4,109.

Mount Vernon.— See WASHINGTON, GEORGE, 582, AND WASHINGTON, MARTHA, 591.

Mount Vernon.— (1) The capital of Posey Co., southwestern Ind., on the Ohio River; pop. (1900), 5,132. (2) A city in Westchester Co., N. Y.; pop. (1900), 20,346. (3) The capital of Knox Co., Ohio; pop. (1900), 6,633. (4) An estate in Fairfax Co., Va., 15 miles southwest of Washington. It is notable as the residence and place of burial of George Washington. In 1859 it was purchased by the Mt. Vernon Ladies' Association.

Mozambique.— (1) A province formerly belonging to Portugal, now a part of the state of East Africa, having an area of about 310,000 sq. m., and a pop. of 1,500,000. (2) A small city, capital of the province of the same name, situated on a coral island just off the mainland.

Mozambique Channel.— Separates the island of Madagascar from the southeastern coast of Africa. It is about 1,000 miles long and varies from 250 to 550 miles in width.

MOZART

THERE is no more interesting character in the history of music than Mozart, and no more pathetic story in fiction than that of his life and of his untimely death.

The marvelous genius of Mozart manifested itself at an incredibly early age, and his brilliant successes, at a time when most children are learning their letters, gave bright promise of a glorious career. This seems but the irony of fate, intended to make more bitter the tragedy of his manhood,— the struggle against poverty, the disappointment, the defeat, the hope deferred, and finally, the disease and the physical suffering, until, worn out by the fight, he was cut off in the very prime of his genius, and in the midst of his work. His life presents a painful contrast to the unvarying success of his dearly loved friend Haydn; its nearest parallel is the life of Schubert.

Leopold Mozart, of Salzburg, Austria, was a musician of considerable reputation,—composer, teacher, and conductor of orchestra to the archbishop of Salzburg. His two children, Marianne and Wolfgang,—the latter born January 27, 1756,—early showed a gift for music, which, in the boy, soon proved to be a wonderful precocity. Their father, in the course of his instruction to the daughter of seven years, discovered to his joy that the talent of his two-year-old son was even greater than hers. The little Wolfgang would listen intently to his sister's playing, and then reach up to the keyboard and try to imitate what he had heard.

At the age of three, the little musician amused himself by picking out chords on the harpsichord; at four, he could play minuets, each of which he learned in half an hour, correctly, and with expression; and at five years, he composed several minuets, and a piano concerto. His father discovered, too, that without instruction, he was entirely at home in playing the violin.

This precocity was not merely the fancy of fond parents, nor was it the premature development of an infant phenomenon which would wear itself out in childhood and produce no lasting achievements. It was the bursting forth of the flame of genius that was burning in his soul. In everything else he was a child, and fond of childish fun, though of a highly endowed, delicate, and sensitive nature, and with a deep earnestness, and a seriousness, when at his music, that gave rise to apprehension lest he should not live to reach maturity.

Leopold Mozart, realizing the stir such a prodigy would cause in the musical world, and hoping to reap therefrom the means to give his son an education and to cultivate his wonderful powers, started on a concert tour with his two children, when Wolfgang was six, and "Nannerl," as he called his sister, was nine. At Vienna, the children were warmly received at court. They played before the Empress Maria Theresa, and became playmates of the little princess, Marie Antoinette. The empress would lift the small Mozart to her lap and kiss him, and the emperor delighted to test in various ways the astonishing acuteness of his ear. But he passed brilliantly through every test, and the pleased monarch called him the "Little Sorcerer." Such premature display of the children, together with the petting, and the feasting, they received, might have resulted disastrously for them but for their father's grave and steady character, his stern adherence to principle, and his strictness in enforcing their education.

The following year, the three made another triumphant tour. This time they went to Paris, where they were warmly welcomed by their former playmate, Marie Antoinette, now queen of France, to whom Mozart dedicated his first published composition, a set of sonatas written there at the age of seven.

From Paris, the children were taken to England, where they were received with the same astonishment, and admiration, that had greeted them elsewhere, and where Wolfgang wrote, and played, his first symphony, as well as sonatas, and other compositions. A member of the Royal Society, who doubted the genuineness of the boy's reputed achievements, put him through a severe examination, and then recorded in the papers of the society his entire satisfaction as to the truth of all that had been said concerning the wonderful child.

Haweis, a biographer of the composers, says that "at the age of twelve Mozart could not find his equal on the harpsichord, and the professors of Europe stood aghast at one who improvised fugues on a given theme, and then took a ride a-cock-horse on his father's stick." Holland, southern France, and Switzerland, were visited with similar success, before the travelers, crowned with laurels and loaded with costly gifts, returned to Salzburg.

The next year was spent in the study of the German, and the Italian, composers, and of the Latin language as it is used in church services.

The archbishop of Salzburg, who employed the services of the elder Mozart, appointed the young Mozart his concert-master, though the small salary attached to the office was cut off for four years. The archbishop was a churlish man, who seemed to bear toward the Mozarts an ill-will which he took no pains to conceal. He made their position in his household as menial and as humiliating as possible, and to his and to his successor's refusal to recognize the genius which others saw in the young composer, and to his hindrance of the many efforts made by the boy to secure an appointment which would allow him to pursue his art untrammelled by anxiety as to his daily bread, are largely due the privations, misfortunes, and disappointments of Mozart's life.

In 1769, father and son went to Italy, whither all musicians went in those days, to finish their education and if possible to establish a reputation. They remained there two years, the proudest and the happiest of young Mozart's career. Everywhere he was greeted as a master, and treated as a prince. Mantua, Venice, Verona, Bologna, Padua, and Florence, showered their highest honors upon him. At Rome, after once hearing in the Sistine chapel the famous *Miserere* of Allegri, which the singers were forbidden to take home, or to copy, Mozart wrote it out from memory, and, after hearing it again, made a few corrections and had it perfect. For this wonderful feat, the Pope, instead of being displeased, conferred upon the boy the cross of the Order of the Golden Spur.

Mozart had already written, besides much instrumental music, a mass, an oratorio, an opera in the Italian style, and a German opera; but in Milan was the beginning of his real career as a composer, when he was commissioned to write an opera for the Christmas festivities there. The production of this work was the most glorious event of his life, as regards personal success. A boy of fourteen, amid storms of applause, and cries of "Long live the little master!" he conducted, in the rendition of his own music, the largest orchestra in Europe. The Milanese said: "It is music from the stars."

The travelers returned to Salzburg, but were immediately summoned back to Milan to compose a serenata for the marriage of the archduke, the production of which was a similar triumph. A hurried return to write another serenata for the installation of the new archbishop, was followed by another visit to Milan, and the composition of an oratorio and an opera. When all this had been accomplished, Mozart was but sixteen years old.

But "a prophet is not without honor save in his own country." It soon became evident that he could expect no appointment from the archbishop. Though in Italy he had received commissions which were given only to the greatest masters, his efforts to obtain a position at even the most trifling salary—he asked but \$150 a year—in Vienna, Munich, Mannheim, and other cities, were fruitless.

Mozart had gained much honor but little money by his tours, and in 1777 it became necessary for him to start on another journey, this time accompanied by his mother, since their means were too limited, and his father's frequent absences had made his own position too precarious, for him to leave again. The letters that passed between the two Mozarts at this time, are full of fatherly care and solicitude on the one side, and of filial respect and devotion, mingled with the fun and pleasantries in which the younger delighted, on the other. The winter was spent at Mannheim, where, though the composer was disappointed, as usual, in securing a position, he was kept busy giving concerts, and lessons. Here he met, and fell in love with, Aloysia Weber, a young singer whom he greatly aided in her studies, and before leaving for Paris in the spring, he became engaged to her.

At Paris, Mozart worked hard at both composing and teaching, but he was not happy, for he liked neither the place, the people, nor their manner of life, and he was

not in sympathy with their music. At this time, too, he suffered a grievous loss, at Paris, in 1778, in the death of his devoted mother, who had cared for him so lovingly during his journeyings. He returned home in the hope of a speedy marriage with Aloysia Weber, and it was another severe blow to his affectionate and loyal heart to find that the young woman had changed her mind, and would have nothing to do with him.

During the following year and a half at Salzburg, without regular employment, Mozart wrote, besides many masses, and vespers, *König Thomas* and *Zuide*. In 1781, he was summoned to Munich, to write an opera for the carnival, the result being *Idomeneo, König von Creta*, which was a great advance on his previous operas. Shortly after this, the archbishop of Salzburg, in whose service the two Mozarts still were, went to Vienna, and commanded the attendance of the young composer. The latter was delighted with the city, and considered it "the best place in the world for one of his profession"; but the archbishop, although he knew that Mozart had no means, persisted in keeping his appointment a merely honorary one, while it prevented him from accepting any other position. Finally, unable to bear longer the archbishop's treatment, after some stormy scenes between them, this service, by mutual consent, was terminated.

In the autumn of this year, Mozart was publishing his sonatas by subscription, was writing an opera of which he had high expectations, had as much teaching as he could attend to, and many concert engagements. Meanwhile, he had again come in contact with the Weber family, and had fallen in love with Constance, a younger sister of his former fiancée. In his opera, *Die Entführung (The Seraglio)*, performed in July, 1782, the heroine bears her name.

The elder Mozart was greatly opposed to the prospective marriage, as his letters show, and the younger tried by every means but with little success to reconcile him. Mozart and Constance Weber were married, in August 1782, when the former was twenty-six, and the latter eighteen, years of age. On the day following the marriage, came the father's reluctant consent, but the old affectionate relations between father and son were never the same afterward. As to whether his marriage was a fortunate step or otherwise for Mozart is a debated question. Some say that his wife was everything that could be desired, a helpmeet in every sense, except for her poor health, which was a heavy drain upon his small resources; others that she was selfish, a poor manager, indifferent to his work, and that she valued his genius only in proportion to the returns it brought in. But whichever may be true, certain it is that Mozart loved her devotedly, and found in her no fault.

Now began a greater struggle than ever to earn the necessaries of life, and the strain was telling upon Mozart's health. Now, also, began the most splendid, the most fertile, period of his genius. From 1782 to 1791 he composed his great works, *The Marriage of Figaro*, *Don Giovanni*, and *The Magic Flute*, besides symphonies and sonatas, and finally the immortal *Requiem*. The last nine years of Mozart's life have been compared to a torch burning out rapidly in the wind.

In 1785, he wrote his six famous sonatas dedicated to his beloved friend Haydn. The next year he produced *The Marriage of Figaro*. At this time, he was enduring much persecution from professional rivals in Vienna, and from the party that was endeavoring to drive out German opera and German composers, in favor of the Italian. But in spite of their efforts to decry his work, *Figaro* was a triumph. The composer's financial condition, however, was such as to allow him little joy in his success.

Mozart was now commissioned to write an opera to be produced in Prague, and while he was engaged on *Don Giovanni*, in response thereto, his father, the old Kapellmeister, died, deeply lamented by his son. *Don Giovanni* was produced in Prague in Mozart's thirty-first year, and was enthusiastically received. The position of court

musician, which Gluck had held, was vacant at this time, and Mozart managed to secure it, though the salary was cut down to a third of what it had been. And yet, in his loyalty to the Austrian emperor, he refused a good offer from the king of Prussia, which would have enabled him to live in comfort. Within six weeks, in 1788, Mozart wrote the symphony in C major, called the *Jupiter Symphony*, and those in G minor and in E flat, respectively. They are considered by many critics "the grandest, most impassioned, and loveliest works in instrumental music."

Mozart now started through northeastern Germany, on a musical tour which proved financially a failure; and when Joseph II. died, the composer did not meet with the new emperor's favor and was deprived of even the small benefits of his court position.

At the beginning of the last year of Mozart's short life, Haydn went to England, whither it was arranged Mozart should follow him. But the forebodings occasioned by the younger composer's overtaxed energies and his failing health were too well justified, and the friends never met again. This last year of Mozart's life was the most fruitful of all, seeing as it did the composition of three great works, *Titus*, *The Magic Flute*, and the *Requiem*. With all his distress, *The Magic Flute* was written gratis, to aid another poor musician.

At this time came, from a stranger who would not reveal his name, a mysterious summons to write a requiem. Mozart threw himself heart and soul into the work, and because of the undermined state of his health, and through the consequent depression of spirit, he conceived a morbid fancy that the summons came from a messenger of Death, and that he was writing his own funeral song. The mystery was solved after his death, when it was found that the unknown stranger was the servant of Count Walsegg, who wished to palm off the composition as his own, and therefore preserved such secrecy.

The production of *The Magic Flute*, in September, 1791, was the last gleam of brightness in the master's life. It was received with the greatest enthusiasm, from the overture to the final chorus.

Meanwhile, Mozart had secured a good appointment which he had long sought, that of organist in the cathedral of St. Stephan, and managers besieged his door with handfuls of gold, summoning him to compose something for them—but it was too late! He lay with swollen limbs, and a burning head, waiting another summons. He was seized in November with what proved to be his last illness, but still he worked upon the *Requiem*, and the conviction that it was for himself grew upon him. He realized that the end was near, and took great pains to impress upon his favorite pupil, Süssmayr, the manner in which he wished the work to be finished. When he had completed a portion, he liked to hear it sung, and on the day before his death, he asked several friends who were present to sing the *Requiem*. He, himself, carried one part, until, at the *Lacremosa*, he burst into tears and fell back upon his pillow. The next day, December 5, 1791, at the age of thirty-five years, passed away one of the few who may be called the greatest musical geniuses the world has ever known. Mozart's last act was to try to indicate to Süssmayr a peculiar effect of kettledrums, which he wished introduced in the *Requiem*.

The next day, the simplest of funeral services were held over the body. It was a cold, stormy day, and of the few friends who were present at the church, not one followed the coffin to the graveyard. The body was buried in the common burial ground of the poor, in a grave with two paupers. The place was not marked, and no one now knows where the bones of the master lie.

Mozart's private character was attacked, and slandered, in his time, but the most searching investigations have proved it free from any stain except that of improvi-

dence, and too great generosity. Owing to the circumstances under which the *Requiem* was written, there was for some time after its author's death, a controversy as to who had really composed it. The truth of the matter is that Mozart conceived the general outline and wrote the greater part of it, while Süßmayr received his master's instruction for the working out of those passages which he wrote.

Mozart's music has been compared, because of its perfect balance and its wide human sympathy, to Raphael's paintings, and to Shakespeare's dramas. Many musicians excel in some one branch of their art, yet are subject to limitations in the general development of their gift, but Mozart was a master in all lines. He was a master of harmony, and of melody, and his music is at once grand and sweet, full of dignity, and simplicity. His music is sometimes described as being "too simple," but it is the simplicity of an art so great that it appears to be not art but higher nature; it is simple because it contains little matter—it is all soul. Like his namesake, Wolfgang Goethe, he often expresses the highest and the noblest thoughts in the simplest and the most unpretentious language. His fund of melody was equaled only by that of Haydn.

Mozart was not a reformer in music. His mission was not to create new forms of art, but to advance, and to develop those already established. He followed Haydn in the composition of the symphony and of the sonata, but gave them a finer treatment than their creator had done; he took up the theories of Gluck in opera, but carried them to far greater heights than Gluck ever reached; and he is considered by all, except the followers of the later Wagnerian school, the greatest master of the operatic art that ever lived. He was, however, the founder of the instrumental concerto, in which form of music even Beethoven did not surpass him.

Mozart also founded the romantic opera, of which *Don Giovanni* is one of the finest examples ever written. *The Magic Flute* was the first genuine fairy opera. The mysterious touches in it are said to have been inspired by the mystic rites of the Masons, of which fraternity Mozart was an enthusiastic member, and it is said to embody the Masonic conception of the brotherhood of man.

The three great symphonies, the "E flat," the *Jupiter*, and the G minor, are masterpieces, equal to Haydn's finest, and almost worthy to rank with Beethoven's immortal nine. The G minor symphony is the tenderest and daintiest of all his instrumental compositions. By the creation of the *Requiem* he became the founder of all modern music of the Catholic church.

As an example of Mozart's wonderful versatility may be mentioned his instrumentation of Händel's *Messiah* for the modern orchestra, which he accomplished in a style so closely following Händel's own that it seems a part of the original composition and adds greatly to its beauty.

The contrast of Mozart's music and life is that of light and shade. In his life, he knew little but suffering, but in his music, his art rises above, it and breathes only an ideal happiness. "It has been prettily said: "He is not the musician of what we are, but of what we dream of being, and of what we shall be in the hereafter."

Mud Hen, The.—See RAIL, 2519.

Mugwump.—A corruption of the Algonquin Indian word "mugquomp," which signifies a chief, ruler, or a person of importance. After long use in local politics, the word came into national use in the presidential campaign of 1884. The newspapers applied the term to those Republicans who refused to support James G. Blaine, the regular party nominee, and it has since been used to designate any person of independent politics or who is supposed to be lacking in loyalty to his political party.

Muhlenberg, Henry Augustus.—Born at Lancaster, Pa., 1782; died at Reading, Pa., 1844. A clergyman, and Democratic politician, son of G. H. E. Muhlenberg. He was minister to Austria (1838-40).

Muhlenberg, John Peter Gabriel.—Born at Trappe, Pa., 1746; died near Philadelphia, 1807. A Revolutionary general and politician, son of H. M. Muhlenberg.

Muhlenberg, William Augustus.—Born at Philadelphia, 1796; died at New York, 1877. An Episcopal clergyman, hymn-writer, and hymnologist;

- great grandson of H. M. Muhlenberg. He was first superintendent and pastor of St. Luke's Hospital, New York. He wrote, among other hymns, "I Would Not Live Alway."
- Mulberry.**—A genus of the order *Moraceæ*, native of temperate and warm climates. The fruit is oblong, sweetish, but insipid.
- Mule.**—A hybrid animal; offspring of the male ass and the mare; valued as a beast of burden in many parts of the world.
- Mulford, Elisha.**—Born at Montrose, Pa., 1833; died at Cambridge, Mass., 1885. An Episcopal clergyman and philosophical writer. His works include "The Nation" and "The Republic of God."
- Mullein, The.**—2895.
- Müller, Frederick (FRIEDERICH) Maximilian (MAX MÜLLER).**—(1823-1900.) Eminent German philologist and orientalist.
- Mullet, The**—2683.
- Münchhausen, Karl Friedrich Hieronymus von (BARON MÜNCHHAUSEN).**—(1720-1797.) A German soldier who served with the Russians in their war against the Turks. Said to be the author of the "Baron Munchausen's Narrative of His Marvellous Travels and Campaigns in Russia."
- Munfordville (Ky.), Battle of.**—Sept. 17, 1862, during his campaign in Ky., Gen. Bragg, the Confederate commander, attacked a Federal force of 4,000 under Gen. J. T. Wilder, at Munfordville. The Federals were outnumbered five to one, and the entire force surrendered. It was composed of raw troops mostly from Indiana. The prisoners were paroled.
- Munn vs. Illinois.**—One of the "elevator cases" decided by the Supreme Court of the U. S. In 1872 Munn and another were found guilty of violating an article of the Ill. constitution in regard to grain warehouses. They had failed to take out a license and give bond, and were charging higher rates for storage than the law allowed. The offenders were fined and the supreme court of the state affirmed the action of the criminal court. That body affirmed the judgment on the ground that the act of the Ill. legislature was not repugnant to the Constitution of the U. S., and that a state could lawfully determine how a man might use his own property when the good of other citizens was involved.
- Murat, Joachim.**—(1771-1815.) Brother-in-law of Napoleon, commander of the French cavalry, one of the most brilliant officers of the period. He became marshal of France and king of Naples. He was defeated and captured by the Austrians and was executed at Pizzo, Italy.
- Murdoch, James Edward.**—Born at Philadelphia, 1811; died at Cincinnati, 1893. An actor and professor of elocution at the Cincinnati College of Music. He made his first appearance at Philadelphia in 1829. In 1840 he left the stage, and devoted five years to study, reappearing as "Hamlet" in N. Y. When the Civil War broke out, he served the Union as nurse, while his two sons were in the army, and gave readings for the benefit of the U. S. Sanitary Commission.
- Murdock, James.**—Born at Westbrook, Conn., 1776; died at Columbus, Miss., 1856. A Congregational divine and scholar. He translated works of Mosheim, and the New Testament from the Peshito version.
- Murex, The.**—See MOLLUSK, 2716.
- Murfree, Mary Noailles (pseudonym CHARLES EGBERT CRADDOCK).**—Born at Murfreesboro, Tenn., about 1850. A well-known novelist. Among her works are "In the Tennessee Mountains," and "The Prophet of the Great Smoky Mountains," and "The Story of Keedon Bluffs."
- Murfreesboro.**—Named from Col. Hardy Murfree, an officer in the Revolutionary War. The capital of Rutherford Co., Tenn. Pop. (1900), 5,531.
- Murfreesboro (Tenn.), Battle of.**—See STONE RIVER, BATTLE OF.
- Murillo.**—3449.
- Murphy, John Francis.**—Born at Oswego, N. Y., 1853. A landscape painter, a member of the National Academy of Design and of the American Water Color Society.
- Murrain.**—A contagious disease which affects most domestic animals except horses. It runs a course of about ten days.
- Murray, John.**—Born at Alton, 1741; died at Boston, Mass., 1815. A Universalist clergyman, called "the father of American Universalism."
- Murray, Lindley.**—Born at Swatara, Pa., 1745; died in England, 1826. A noted grammarian. He was admitted to the bar in 1765, afterward accumulated a fortune in commercial pursuits, and in 1784 settled in England. His chief works are "The Power of Religion on Mind" and "English Grammar."
- Murray, William Henry Harrison.**—Born at Guilford, Conn., 1840. A Congregational clergyman, pastor of the Park Street Congregational Church (1868-74). He was the author of "Camp Life in the Adirondack Mountains," "The Perfect Horse," and "Tales."
- Murray Hill.**—A district in New York city; beginning at 34th St. and extending to 40th St. It was named from a Quaker family who owned an estate on the site.
- Mushroom.**—A fungus including a large number of species. The edible species are highly esteemed as an article of food. The poisonous species are popularly called toadstools. Its rapid growth gives rise to the figurative use of the word, meaning "ephemeral."
- Music.**—3201.
- Music, Abbreviations in.**—3408.
- Musical Culture, The Artistic Value of.**—3396.
- Musical Education, The Esthetic Value of a.**—3370.
- Musical Study, The Hygienic Value of.**—3366.
- Musical Terms, Glossary of.**—3403.
- Music as a Career.**—5032.
- Musicians, Young, Rules for.**—3401.
- Music, Minor, Introduction to.**—3384.
- Music, Tone-Color.**—3270.
- Muskalonge, The.**—See PIKE, 2693.
- Muskdeer, The.**—See DEER, 2418.
- Muskegon.**—The capital of Muskegon Co., Mich.; on Muskegon Lake, near Lake Michigan. The

leading industry is the lumber manufacture and trade.

Muskingum.—A river in Ohio, formed by the union of the Tuscarawas and Walhonding rivers at Coshocton.

Musk-ox (*Ovibos moschatus*).—An animal found in the most northern parts of North America along the shores of the Arctic Ocean and south to the 60th parallel. In appearance it combines many of the characteristics of the sheep and the ox. The male exhales a musky odor, hence the name. The animal is covered with long, thick, matted brow hair. The horns have broad bases and are curved downward.

Muskrat, Musquash, or Ondatra.—A small quadruped having a musky odor, and resembling in appearance the rat. It has five toes, is web footed, and inhabits rivers and lakes. It burrows in the banks or makes for itself commodious houses out of grasses, etc., its habits being much like those of the beaver. It is found in all parts of North America, and is valued chiefly for its fur.

Muskrat, The.—2440.

Muslin.—A thin, delicate, cotton fabric which takes its name from Mosul which is near the site of ancient Nineveh. Very delicate muslins are woven at Dacca, in the East Indies.

Mussells.—2718.

Musset, Alfred de.—(1810-1857.) A French novelist, play wright, and poet.

Mustard.—A yellow flowering plant of the genus *Brassica*, valued chiefly for its seeds. The pulverized seeds are made into a paste which is popularly used as a condiment. In medicine mustard is used as a counterirritant in the form of a plaster or poultice.

Mycenae.—An ancient city of Greece in the plain of Argos. It is noted for the remains of antiquity found there by excavation.

"My Policy."—The administrative course of President Andrew Johnson (1865-68), which was hostile to the policy of the Republican congress, and which led to the impeachment proceedings against him, in 1868.

Myron.—3547.

Myrrh.—A resinous gum derived from the bark of a spiny shrub, or scrub tree, of various species of *Commiphora*. It is largely used for perfumery and incense. It is grown chiefly in Arabia and eastern Africa.

Myrtle.—A genus of *Myrtaceæ*; native of all the countries around the Mediterranean Sea and of the temperate parts of Asia.

Mysia.—An ancient province in Asia Minor touching Lydia, Phrygia, Bithynia, and the Ægean. The most important cities in it were Pergamum and Cyzicus. The Mysians were allies of Troy in the Trojan war.

Mysore.—A native state in South India. It has few rivers and none of them are navigable. The country is rich in mineral wealth. The capital was Mysore until 1831, when the seat of government was removed to Bangalore.

Mythology.—1519.

Hindoo, 1521.

Chinese, 1552.

Assyro-Chaldean, 1566.

Egyptian, 1583.

Phoenician, 1597.

Greek and Roman, 1603.

Norse, 1631.

American Indian, 1646.

Mytilene.—The ancient name of the chief city on the island of Lesbos in the Ægean Sea off the coast of Mysia. It played an important part in the Greek and Persian wars. It was a stronghold of the Venetians in the Middle Ages, but has belonged to Turkey since 1460.

N

- Nagasaki.**—One of the chief commercial cities of Japan. Pop. (1891), 58,142.
- Naglee, Henry Morris.**—(1815-1886.) A Union general in the Civil War.
- Naiads.**—In Roman and Greek mythology, female deities presiding over springs and streams.
- Nairne Baroness** (CAROLINA OLIPHANT).—(1766-1845.) A noted Scottish poet.
- Nancy.**—Capital of the department of Meurthe-et-Moselle, France. It has manufacturing interests, and contains an interesting cathedral, and the palace of the dukes of Lorraine.
- Nancy Hanks.**—The maiden name of the mother of Abraham Lincoln.
- Nancy Hanks.**—A fast trotting mare. In 1892 she broke the trotting record of Sunol (2:08 $\frac{1}{4}$) by a mile in 2:05 $\frac{1}{4}$. This she herself lowered to 2:04 in Oct., 1892.
- Nanking.**—Formerly called Kinling, capital of the province of Kiangsu, China.
- Nansen, Fridjof.**—(1861-.) Norwegian Arctic explorer. Author of "Furthest North" (1897).
- Nantasket Beach.**—In Massachusetts; a peninsula of Plymouth Co., projecting into Massachusetts Bay. It is a popular summer resort.
- Nantes.**—One of the important seaports of France; capital of the department of Loire-Inférieure. It has shipbuilding industries, manufactures, and an extensive trade in sugar and tobacco.
- Nantucket.**—(1) An island in the Atlantic, about 25 miles south of the mainland of Mass. Length, 18 miles. Area, about 45 sq. miles. (2) Nantucket Shoals.—A group of dangerous shoals in the Atlantic, southeast of Nantucket. (3) Nantucket Sound.—That part of the ocean which lies between Nantucket on the south, and Barnstable Co., Mass., on the north.
- Napier, John.**—(1550-1617.) Famous Scotch mathematician; the inventor of logarithms.
- Napier, Sir Charles.**—(1786-1860.) A distinguished British admiral.
- Naples.**—Capital of the province of Naples, Italy, situated on the coast of the Bay of Naples. One of the most beautiful, and the largest, of the Italian cities. Pop. (1893), 532,500.

NAPOLEON.—(1769-1821.)

The life of Napoleon "the Great" is more interesting and pathetic than any novel. The series of his successes is the most marvelous in history. Born of a private family in the little island of Corsica, beginning life as an obscure provincial, almost as a man without a country—he rose as high as the great heroes who had started in better circumstances. By being ready

to act for his country when the call came to him, he obtained a position by which he was able to march with events, dictate to kings and emperors and become the most prominent man in the world. He stands out as a unique character in history.

Napoleon inherited in a large degree many of the good traits of his mother, who had great energy, a strong will, and excellent judgment. While speaking of the manner in which she had cared for her fatherless family of eight children, he once said: "She managed everything, provided for everything with a prudence which could never have been expected from her sex nor from her age. Ah, what a woman! Where shall we look for her equal? She watched over us with a solicitude unexampled. Every low sentiment, every ungracious affection was discouraged and discarded. She suffered nothing but that which was grand and elevated to take root in our youthful understandings. She abhorred falsehood, and would not tolerate the slightest act of disobedience. None of our faults were overlooked. Losses, privations, fatigue, had no effect upon her. She endured all, braved all. She had the energy of a man, combined with the gentleness and delicacy of a woman."

While a boy, he spent five years in a military school near Paris. He was quiet and studious. He was especially devoted to Plutarch's lives, and Cæsar's "Commentaries," and was always trying to discover how the men whom he studied became great. He was both industrious and persevering and easily stood at the head of his class in mathematics. During play-hours, he often remained in the library to read works of history. Surrounded by boys who were rich and who ridiculed him and his country, he keenly felt his poverty. He was cold in manner, and talked little, but he had no ill-will for his classmates.

Chosen as one of the best scholars in the school, he was sent to the Military College at Paris, where he soon protested against the expensive manner in which the young men were living, and urged that they should learn great self-reliance, and eat simpler food—that they should practise temperance and activity in order to fit themselves for the hardships of war. He soon won the admiration of his teachers.

In 1785 he was made second lieutenant of artillery; but he continued to study subjects relating to government and military affairs. He read much, and wrote some essays. He often

Napoleon.—*Continued*

remained in his room at work, while other officers enjoyed themselves in social life and gossip. By his years of study, he made himself a master in the science of war, and well acquainted with the affairs of government. His years of preparation made him ready for the great opportunity which came to him in the events growing out of the French Revolution.

In October, 1795, when he quelled the mob and restored order in Paris, he became the hero of the hour. With entire self-possession, coolness, and never-failing courage he had shown himself equal to a great emergency. He was soon made general of the interior, with the command of Paris. For the next twenty years he was the commanding figure not only in France, but in Europe. His days of poverty were over, but he did not forget to sympathize with those who were still poor, and to help them.

In March, 1796, a few days after his marriage to Josephine, he was sent to command an expedition into Italy. Though he had an army "without pay, without provisions, without shoes," he resolved to strike quickly. Soon, he routed the Austrians, and stood upon the fertile plains of Italy. He struck quickly, unexpectedly, and hard. To his courageous and enthusiastic soldiers he said: "In fifteen days, you have won six victories; captured twenty-one flags, fifty cannon; many fortified places; conquered the richest part of Piedmont; you have captured fifteen thousand prisoners, and killed and wounded ten thousand men. You lacked everything; you have gained battles without cannon; crossed rivers without bridges; made forced marches without shoes; often bivouacked without bread; the Republican phalanxes were alone capable of such extraordinary deeds. Soldiers, receive your due of thanks."

On May 15, he entered Milan in triumph. He said he gave all of the glory to his men "who had rushed like a torrent from the height of the Apennines." From that day his men were animated with a new spirit.

After a battle at Arcole which raged for three days, he drove the Austrians back and entered Verona in triumph. Two months later, he gained another great victory on the plains of Rivoli, which made him master of Italy. He immediately started to invade Austria, who, not caring to risk another battle with him, soon began negotiations which ended the war (1797).

While vanquishing enemies abroad Napoleon had also sent money to uphold the government at home. He had made his battles pay their own expenses and also furnish a surplus to send home.

Returning to Paris, he began to prepare for an expedition to Egypt—in order to gain control of the Mediterranean and to overthrow British supremacy in India. In the spring of 1798, he seized Malta, and in July landed in Egypt and carried Alexandria by storm. Three

weeks later he encamped near Cairo, under the shadow of the monuments of the Pharaohs. "Soldiers," he said, "from the summits of these pyramids, forty centuries look down upon you." Then he led his courageous men to new victories which made him master of all Lower Egypt. Hearing that Nelson had destroyed his fleet, cutting him off from France, he said: "This reverse will compel us to do even greater things than we had planned." Advancing into Syria, he took Jaffa, but failed in an attack on Acre and returned to Egypt.

In October, 1799, leaving his army behind he suddenly and secretly went to Paris, put himself at the head of affairs, overthrew the weak Directory, and secured a new constitution under which he was chosen first consul for ten years. He put an end to anarchy and party strife, made laws which set the government on its feet, and organized a brilliant court. Later, he created a new nobility (based on merit), improved the educational systems, encouraged learning, began the construction of a great system of roads, canals, harbors, and other public works, and caused the laws to be revised, condensed, simplified. Gradually he centralized all power in the hands of a few officials at Paris. He had a favorite maxim that "The tools belong to him who can use them."

Having control of France, he resolved to be master of Europe. For fifteen years he set up kings and put them down at pleasure.

In 1800, he resolved to cross the Alps and strike the Austrians who had been attacking his troops in Italy. By his tireless energy, within six days he took an army of thirty-five thousand men across the rocky snow-covered barriers, moved like an avalanche into the plains of Italy, and, after an obstinate contest won the great victory at Morengo, which led to the treaty of Lineville.

In revenge for the loss of Malta and Egypt he began preparations for the invasion of England, but decided to sign a treaty of peace at Amiens in the spring of 1802. A few weeks later, when he was made first consul for life with the privilege of choosing his successor, he formed plans to extend the area of his control—both in Europe and America. Realizing that he would be brought into conflict with England and needing money he sold Louisiana to the United States, but still held to San Domingo. In 1805 soon after he had been crowned emperor of the French and king of Italy, he began a contest with England and her allies which lasted ten years. It was a war of the giants, in which his brilliant achievements dazzled and amazed the world.

He resumed preparations for the invasion of England; but after the sea-fight off Cape Trafalgar, he turned all of his forces against Austria, and soon matured a scheme for starving England into submission by decrees against her commerce. After a victorious march, he entered Vienna in triumph. Three weeks later, at Austerlitz, he gained one of the most bril-

Napoleon.—Continued

liant successes of his life. Here is what he wrote Josephine:—

“3d Dec., 1805.

“I have beaten the Russian and Austrian armies commanded by the two emperors. I am a little tired. . . . I go to sleep for two or three hours. . . . I embrace you.

“Napoleon.”

After granting peace on his own terms, he dissolved the old German empire and proceeded to reconstruct Germany. He also seized Naples and placed his brother Joseph on the throne; then he converted the Netherlands into a monarchy under the rule of his brother Louis; and finally he bestowed nineteen Italian dukedoms upon his most trusted officials.

When the power formed a new combination against him, he completely humbled the Prussian monarchy in two tremendous battles (1806), and entered Berlin in triumph.

By the treaty of Tilsit, of July, 1807, he compelled Prussia to give up a large part of her territory, and from a part of it he created the kingdom of Westphalia, which he gave to his brother Jerome.

After giving Europe a brief breathing spell, he turned to swallow Spain and Portugal, in order to keep out English commerce. He jumped the Pyrenees, placed his brother Joseph on the throne of Spain, and took a title-deed to Spanish-America.

He had now almost reached the high-tide of his wonderful career, and was already sowing the seeds of future defeat. He soon found that the high-spirited Spaniards resented his invasion, and began to kindle fires which set the country in a blaze of war. He found that he had a whole nation to fight. He met his first reverse when Joseph was driven from Madrid. He prepared to give himself a second blow, when he quarrelled with the Pope, annexed his city, and carried him off to France as a prisoner.

In 1809, when Francis I. declared war against him, Napoleon swept across the Danube, and for the second time brought Austria to his feet, entered Vienna in triumph and obtained new cessions of territory. In the following year he divorced Josephine and married Maria Louisa, archduchess of Austria.

He was now on the dizzy heights of his fortune and glory. He exerted a power greater than any one since Cæsar or Charlemagne. He ruled a vast empire, holding Austria and Prussia completely subject to his will, and with Russia and Denmark as his allies. But the morning of his success was ended. The sun of his fortunes had passed the meridian. By his wars, he had sown the seeds of discontent, weakness, and dissolution.

When Russia cast aside the ties of alliance with France, and admitted English goods to her ports, Napoleon bent all his energies toward the greatest attempt of his life. He felt that the crisis of his life had come. In June, 1812, he

crossed to Russia with 450,000 men, and pushed onward to Moscow, where he was disappointed by finding no food nor shelter for the winter. The Russians had lured him on to his ruin. After five weeks he resolved to return. In the long retreat his “Grand Army” was almost entirely destroyed by cold and starvation.

Finding that a sixth coalition was formed against him, including Russia, Prussia, England, and Sweden, Napoleon put forth all his energy to prepare for the struggle. He was not the man to yield to superior numbers. By the spring of 1813, he was at the head of an army of three hundred thousand young men. Though he won two decisive victories he was finally defeated at Leipsic, and forced to retreat to Paris, which surrendered to the allies in March, 1814. He was forced to abdicate his throne, and was sent as an exile to rule the little island of Elba, a mere speck on the map of Europe.

In the following March, desiring a wider field of action, he escaped to France, disturbed the map-makers at Vienna, aroused the country by his personal magnetism, and marched in triumph to Paris, where the populace seemed delirious with joy because of his return. He desired peace; but when the allies leagued their armies to crush him, he began preparations for his final combat with Europe. He had lost faith in himself but he worked with the old-time energy. Though he fought valiantly, he was defeated by Wellington in the desperate battle of Waterloo, on Sunday, June 18, 1815. As Wellington surveyed the bloody field, he said: “A great victory is the saddest thing on earth, except a great defeat.”

Napoleon escaped to Paris with the spring of his strong will broken. Declaring that his public life was finished, he proclaimed his son emperor of France. He soon gave himself up to the English authorities, who sent him as a prisoner for life to the desolate rock of St. Helena, where he died in 1821.

Napoleon had both virtues and vices. His successes were due to his virtues. He was active, brave, and untiring in his efforts. He had a strong will and great energy. He did not like the word “impossible.” When the Alps stood towering between his army and Italy, which he wished to invade, he said: “Impossible is the adjective of fools. There shall be no Alps.” He led his troops across, and soon Italy lay at his feet. He often won by prompt action. He avoided delays. He preferred to be a quarter of an hour beforehand. He usually had a directness of purpose from which he never flinched nor turned aside. When he had a point to take he spared neither himself nor his men.

He had a marvelous power for work. Nobody labored harder. He kept several clerks busy. He seldom took over twenty minutes for dinner. He was very temperate, but ate rapidly. He was very prompt, and required others to be so. He worked constantly. He had courage for any event that might arise. In each mo-

Napoleon.—*Continued*

ment he knew what to do next. He always had a plan for the future. He was a strong and ready actor who took occasion by the beard, and time by the forelock.

He neglected nothing that was important, and he never forgot the poorest who needed his kindness. In the joy of victory, he never forgot the wounded. Though he was ambitious, he hated selfishness. He knew how to control himself, and this made him better able to control others. In morals he will compare favorably with the men of his age. He acted upon the

principle that the end justifies the means—that so long as the public good is the object almost any act is permissible.

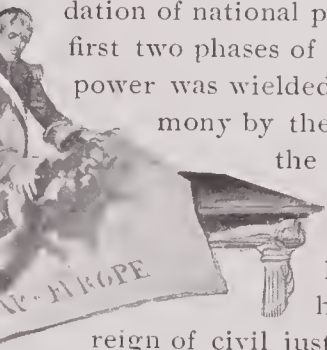
Without attempting to pass judgment upon Napoleon's motives, or his faults and mistakes, it is safe to say that he put into motion the forces which resulted in good. He stirred Italy to a newness of life, and helped Germany to throw off old oppressions. He made good laws. He helped to spread principles of political liberty, which it was impossible to smother by the reaction which followed the close of his brilliant career.

NAPOLEON, EUROPE AFTER

THE POLITICAL EVOLUTION OF THE NINETEENTH CENTURY—THE PROGRESS OF NATIONAL CONSOLIDATION, CONSTITUTIONAL LIBERTY, AND ECONOMIC DEVELOPMENT—THE MAP OF EUROPE IN THE TIME OF NAPOLEON—THE OUTBURST OF NATIONAL LIFE IN SPAIN, GERMANY, AND RUSSIA—READJUSTMENTS OF THE CONGRESS OF VIENNA—EXTENSION OF THE MARITIME EMPIRE OF GREAT BRITAIN—THE INDEPENDENCE OF GREECE AND DISMEMBERMENT OF POLAND—EUROPE IN THE MIDDLE OF THE CENTURY.

THE history of Europe during the nineteenth century, in connection with the wonderful development of the United States, is the history of modern civilization.

The progress of the century has been marked by a more striking evolution, political and economic, than any preceding century in the history of the world. This evolution has proceeded with parallel steps along three great lines,—consolidation of national power, growth of civil liberty, and economic development. The first two phases of this historical process had some elements of antagonism when power was wielded by an absolute monarch, but they have been welded into harmony by the union of representative institutions and democratic ideas with



the wide powers which are exercised by the modern state. Economic progress, vastly increasing the resources of the whole community, and raising to the ranks of the professional and higher social classes an increasing proportion of the people, has in itself been one of the potent factors in promoting that reign of civil justice, responsibility of rulers to the law, and equality of all men before the law, which have come to be recognized as the supreme test of our civilization.

How this reign of equality of rights under constitutional law has been brought about is the subject of this chapter and of those which follow. It will then remain to discuss the new political development upon whose threshold civilized society stands at the opening of the twentieth century. The movements for national unity and constitutional government have so largely done their work in the Anglo-Saxon countries, and even to some extent in Continental Europe, that the struggle is becoming less acute over merely political questions, and is taking on more distinctly the character of a contest over those purely economic questions which affect the well-being of the laborer in his daily work and of the nation in its struggle for commercial power. The champions of the right of the people to political privileges and to equality before the law are almost enabled by existing conditions to furl their banners upon a field where their victory is acknowledged and complete; but the banners are being unfurled in a new

contest, which promises to be more acute in some respects than that of the past century, and to lead, perhaps, as often to encounters upon the field of battle. This new conflict is that for commercial supremacy between the nations, and for equality of opportunity for wealth and happiness between the individuals in the nation. In its first aspect it involves the question of resolute diplomacy in behalf of national interests in all markets; in the other aspect, it involves the merits of socialism on the one hand and of unrestricted competition on the other. Upon these questions some light will be thrown by the history of colonial expansion which will conclude the political portion of this brief summary, and by the record of the increase in public and private wealth, in the equipment of society with the resources of production, and in the growing comforts of all classes which have been the consequence of the progress of the nineteenth century.

The French Revolution first rudely broke the bands which held the masses in servitude to the privileged classes, and lighted the torch which set aflame the democratic instinct throughout Europe. But the explosion of forces so long repressed by unbearable taxation, hostile discriminations, and brutal outrages, was so violent that it invoked an almost equally violent reaction. Napoleon, although the restorer of civil order, distorted the progressive elements of the French Revolution into a crusade against the national life of countries beyond the domains of France. When France, therefore, was driven back within her ancient boundaries, after Napoleon's defeat on the memorable eighteenth of June, 1815, at Waterloo, the Congress of Vienna was able for a time to repress the democratic movement toward popular rights, while giving something like normal direction to the tendency toward independent national life.

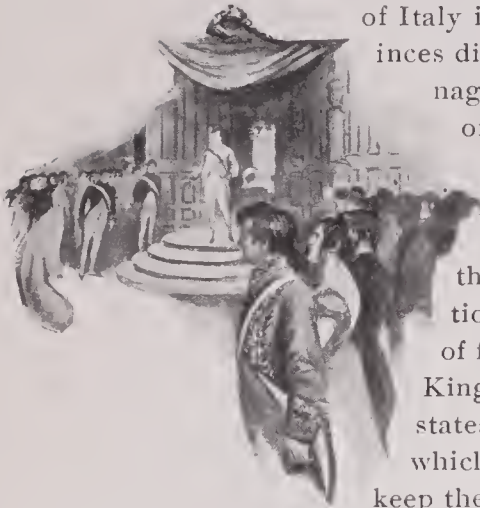
The process of consolidation of national power had been attempted by Napoleon, but along the lines of military conquest rather than of race affinity. He sought by means of force to impose the government of a single nation over other peoples, as desirous as the French of civil rights and independent national life. The shadow of the ancient consolidation which had been established by the Roman emperors lingered only in a name. That name Napoleon wiped out when he required the Austrian emperor, after the French victory of Austerlitz (December 2, 1805), to renounce the title of "Holy Roman Emperor." Mr. James Bryce well says:—

"Of those who in August, 1806, read in the English newspapers that the Emperor Francis II., had announced to the Diet his resignation of the imperial crown, there were probably few who reflected that the oldest political institution in the world had come to an end.

With the extinction of the title which had come down from the Cæsars, Napoleon dreamed of creating a new empire as powerful and far-reaching as theirs. After successive victories over Austria, Prussia, and Russia, culminating in the surrender of an Austrian princess as his empress, it seemed for a few years that he had brought under his sway the whole of Western civilization. When Bonaparte, not yet even emperor, negotiated the peace of Amiens with Great Britain, in 1801, he instructed his envoy Joseph Bonaparte, through Talleyrand, "You are forbidden to entertain any proposition relating to the king of Sardinia or to the internal affairs of Batavia, of Helvetia, or the Republic of Italy." This list of subjects excluded from the consideration of England, as Mr. Fyffe aptly declares, "was the list of aggressions by which Bonaparte intended to fill up the interval of Continental peace."* The government of the Batavian republic was dissolved in September, 1801, and a more pliable government was substituted. The representatives of the Cisalpine republic, made up of the Northern states of Italy, crossed the Alps in the middle of winter to meet Bonaparte at Lyons, and to receive at his hands a constitution already drawn up by Talleyrand, the French Minister of Foreign Affairs. They offered the presidency of the republic

*"History of Modern Europe," p. 163.

to the conqueror, on January 25, 1802, and it was a natural consequence, after he placed the crown of France with his own hands upon his head, in that dramatic scene of the second of December, 1804, at Paris, that he should be asked to transform the presidency of Italy into a crown, with himself as the wearer of it. The Illyrian provinces did not escape the greed of Napoleon. Southern Italy was an appanage of France under the kingship of Murat, who had won the hand of one of the sisters of the world conqueror. In Switzerland, civil war annulled the long preserved independence of the mountaineers and forced them into vassalage to France.



After Austerlitz, French power was extended over Germany by the formation of the Confederation of the Rhine. The Confederation included the Helvetic league,—what was left of the national life of free Switzerland,—the large Kingdom of Bavaria in the South, the Kingdom of Saxony in the heart of Germany, many smaller German states in the West, and the Duchy of Warsaw,—the phantom state by which the French conqueror sought, while breaking it to the hope, to keep the promise of national independence to the ear of Polish patriots. Holland became a vassal of France in 1805, by the crowning of Napoleon's brother Louis as king; the provinces of Flanders were divided up between France and Holland, and finally, in 1810, even the normal sovereignty of Louis was brought to an end, and Holland became a province of the French Empire. The Hanse towns, already occupied by French troops, were incorporated into the Empire in the same year. Portugal fell a victim to French bayonets because she refused to enforce "the Continental system" of excluding British goods and ships. Napoleon announced that "the House of Braganza had ceased to reign," and dispatched a French army under Junot to Lisbon to carry out his decree. In Spain the conqueror intervened as an arbiter between Charles IV. and his dissolute son, Prince Ferdinand, only to brush them both aside and to install his oldest brother Joseph on the throne of Castile.

The Empire of Napoleon, therefore, threatened for a time to submerge Western civilization almost as completely as that of Alexander absorbed the civilization of Asia, and Greece. From Lisbon on the Western edge of Europe to Warsaw, almost on the confines of civilization, and even to the tip of the Calabrian Peninsula, where once flourished the luxurious civilization of "Greater Greece," the authority of the French emperor was either openly acknowledged or was represented by puppet kings who had served in the French ranks and who were supported by French bayonets. But a consolidation of this character was not along the lines of natural development, and it was inevitable that an empire, thus conflicting with all the sentiments of true national life, should fall to pieces of its own weight after the fall of the conqueror, even more completely and finally than the Empire of Alexander, after his death, was divided among his generals.

The attempt of Napoleon to create an empire by force produced reaction among the conquered peoples which contributed much toward the creation of a true national spirit and the birth of modern European nationality. The first conflicts between France and her opponents were looked upon with comparative indifference by the masses of the people, as the contests of kings and governments for selfish purposes. But when the French Empire began to wipe out the boundaries of nations, and the French flag and French dictation were insolently flaunted in the faces of all European peoples, the true nature and tendency of the purpose of Napoleon began to dawn upon all men. Even Great Britain, in spite of the protection afforded by her sea-girt isles, was threatened with invasion, and her people were kept under arms, ready to respond

to the beacon fires which were to be lighted if the French descended upon the English coast. It was in Spain, where devotion to the crown and the church, as the centers of the national life, was strongest, that the French first tasted the stubborn resistance of an aroused people. It was the skill of Wellington with his British troops, that turned back the army of Messena, one of the most competent and stubborn of Napoleon's generals from the lines of Torres Vedras, which had been built for the protection of Lisbon (October, 1810); but it was the harrying of Messena's rear by the Portuguese, and Spanish, peasants which cut off the supplies of the French, broke their spirit, and made French control of the Peninsula a mockery. It became a proverb that "A Spanish army was easy to beat, but hard to destroy." The survivors dispersed after a lost battle, but came together again in small bands and so thoroughly harried the country that it was impossible for the French even to transmit messages without sending strong guards. It was in Portugal and Spain that the French first ceased to be invincible, and it was from Spain that Wellington crossed the Pyrenees and entered Bordeaux in the spring of 1814, at almost the same time that the allied armies on the North captured Paris and compelled Napoleon to resign his Empire.

It was the great uprising of the people of Germany, however, and the patriotic courage with which the Russian peasants sacrificed their all to resist the French invasion in 1812, that brought home most forcibly to Napoleon the difference between fighting an army and fighting a nation. German national spirit had been stirred by Stein, but the latter was compelled to flee to the Russian court, while the weak king, Frederick William, permitted himself to serve as a vassal of the French emperor. When the remnants of Napoleon's legions straggled back, through the blinding snows, from the deserted plains of Russia and the blackened buildings of Moscow, having left the flower of the French army dead, or prisoners in the hands of the Cossacks, the true leaders of the German people felt that the time was ripe for throwing off the French yoke. It required years of humiliation, the quartering of French soldiers upon the people, the exhaustion of farms and storehouses to supply the invaders, and repeated insults to German national ideals to impart to the phlegmatic people the flame which had caught so quickly in Spain and which burned so steadily in Russia. But the German national spirit was aroused at last, under the impulse of the ideas of Goethe, and Stein, and even the king was compelled to confess in a proclamation the failure of the French alliance and to appeal to the memory of the great Frederick and his predecessors as justification for resistance to France. When it became clear that the German movement against Napoleon was not merely political, but an outbreak of independent national life, his doom was sealed. The accession of Austria, to the alliance of Russia, Prussia, and England, created forces which overwhelmed the exhausted armies of France, sent Napoleon into exile, and enabled the Congress of Vienna to make over the map of Europe. The return of Napoleon from Elba in the spring of 1815 was a brilliant and romantic episode, but it stayed for only a moment the evolution of the new order of things. Even if the strategy of Napoleon had been successful at Waterloo, his victory would have been only temporary in its results and could not have sterilized the seed which was to bloom during the century in the union of Germany and the unity of Italy.

The Congress of Vienna brought together all the crowned heads of Europe, including two score petty German and Italian princes, and their ministers of foreign affairs. The Congress was nominally held to decide upon the redistribution of the territory which had been appropriated and distributed by Napoleon. Its proceedings, however, were more or less of a formality, since the four great powers which had overthrown Napoleon,—Great Britain, Russia, Prussia, and Austria,—had already decided by a secret treaty what action should be taken on the most important questions. Russia

had already gained Finland, Bessarabia, and the greater part of Poland; Austria had won Venice, and the Illyrian provinces; Prussia had received an extension of territory in Poland, and in Northern Germany which more than doubled her area. Several of these changes had taken place before the fall of Napoleon, and with his sanction, and none of these powers proposed to surrender to their ancient rulers the conquests they had thus obtained. In Spain, Holland, Westphalia, Piedmont, and Tuscany, the banished royal houses resumed their sovereignty. Norway had been promised to Bernadotte, king of Sweden, in return for his support against Napoleon. The Norwegians in vain protested against being handed over like slaves to a new ruler, but the compact, originally made by Alexander of Russia, had the endorsement of the Allies, and a British fleet was sent to aid Bernadotte in stamping out the resistance of the Norwegians (April–August, 1814).

The deliberations of the Congress of Vienna were still going on when they were interrupted in a dramatic manner by the news that Napoleon had returned from Elba, that Louis XVIII. had fled from Paris on the night of March 19, 1815, and that Napoleon had entered the city in triumph on the next day and had again set up his Empire. The powers acted promptly in renewing the Treaty of Chaumont, by which they had bound themselves just before the first fall of Napoleon, in 1814, to sustain their coalition against France if need be for a period of twenty years. When the brief interlude of "the hundred days" was at an end,—the period during which Napoleon reigned,—and Louis XVIII. was again seated on the French throne, matters were adjusted much according to the original program, except that France lost a little more territory than was originally proposed. The second treaty of Paris compelled her to pay indemnities of about \$200,000,000, to consent to the occupation of the Northern provinces by an allied force of 150,000 men for a period not exceeding five years, and to pay the cost of this occupation.

The map of Europe after the fall of Napoleon resumed something of its character before 1792, but several changes had been made tending toward that unity of national life which afterward became the dominating movement of the century. The Kingdom of Poland remained a memory; Prussia was greatly enlarged, and was put in a position to lead in the unification of Germany in later years; Austria had become a greater power than before the wars; and Russia had emerged more distinctly than before from the mists of Asiatic barbarism to enter more fully the circle of the civilized powers of the West. "Germany and Italy," Mr. Fyffe declares, "were no longer mere geographical expressions; in both countries, though in a very unequal degree, the newly aroused sense of nationality had brought with it the claim for unity and independence." Great Britain, whose resolute spirit and liberal grants of money had done so much to keep alive the opposition to Napoleon, was well rewarded for her sacrifices. Many of the outposts of that Empire upon which the sun never sets were confirmed in her possession by the treaty which preceded the Congress of Vienna. In Europe, Great Britain received two strongholds which, with the key of the Mediterranean at Gibraltar, gave her a footing at each strategic center of this great thoroughfare of European commerce. The new points were Malta, the ancient fortress of the Knights of St. John, lying directly south of Sicily and Italy, and the Ionian Islands, commanding Asia Minor and the path to Constantinople. The small Island of Heligoland in the North Sea also remained in British hands; in America, a portion of the old Dutch colony of Demerara was converted into British Guiana; two islands in the West Indies were taken from France; and the valuable island of Mauritius in the Indian Ocean was ceded by the same power; and Ceylon became an annex of British India. Holland gave up her settlement at the Cape of Good Hope, which became a safe stopping place on the way to India, and the nucleus of the British Empire in South

Africa. While these points of vantage were of the first importance to Great Britain, she acted with a certain degree of generosity in handing back to France, and Holland, many valuable colonies which had fallen into her hands by the fortunes of the naval wars.

While the reaction against the military empire of Napoleon tended, therefore, to strengthen the sentiment of nationality, and to create rallying points for the future, the principle which guided the great ministers at Vienna was that of the "equilibrium of Europe," or the so-called "balance of power." France was shorn of her conquered provinces, including some which had become essentially French, in order that she might not be stronger than either of the other great powers, or at least not stronger than any two of them. Switzerland, and the Netherlands, were restored to independence, and their neutrality was guaranteed by the powers, more that they might act as buffer states between France and her greater neighbors than from any wish to conform to the wishes of their people. There was so little sympathy, indeed, between the Protestant provinces of Holland and the Catholic provinces of Flanders, and the Belgians were treated with such scant courtesy by the Dutch king and his advisers, that they had the sympathy of all western Europe in their revolt in 1830. Belgium became an independent state by the tardy acknowledgment of the great powers in a conference held at London in 1831. This was the first serious breach in the "equilibrium" established by the Congress of Vienna. Liberal ideas continued to undermine the foundations of the old order, but "the peace of Europe" remained practically undisturbed for nearly forty years,—and even then was broken only by a conflict over a disturbance of the equilibrium at the eastern gate of the Mediterranean, upon which Russia had long fixed her eager eye, but which had not been thought important enough for consideration by the powers in 1815.

While western Europe slumbered in comparative submissiveness under the policy of reaction adopted by the great powers, unrest began to show itself in the misgoverned provinces of European Turkey. Servia, which had long been struggling for wider privileges, gained local autonomy under its own princes in 1817, although still garrisoned by Turkish troops and paying tribute to the Sultan. Russia, who had been for her own purposes the constant friend of the Slavonic Christians, had been compelled, by the treaty of 1812, to abandon Wallachia, and Moldavia, near the mouth of the Danube, to the Turkish government as an incident of her preparations for resisting the French invasion. The territory of ancient Greece had apparently been passed over in the military movements and diplomatic intrigue of the Napoleonic period. The country was inhabited by a mixed race of Greeks and Albanians, among whom the Greek strain predominated. The worst form of tax-farming and extortion governed most of Continental and Peninsular Greece, but many of the Greek islands in the Mediterranean enjoyed comparative safety and prosperity through the payment of fixed sums to the Turkish tax gatherers. The Ionian islands had fallen to France when Napoleon conquered Venice in 1797, but were captured by the British after the French fleets had been driven from the sea.

The revolt of the Greeks did not at first arouse much sympathy in western Europe. The crowned heads of the powers which had crushed Napoleon hesitated, in the forcible language of Mr. Oman, whether to regard the Turkish sultan, Mahmud, "as a legitimate monarch endeavoring to suppress Liberals, and therefore, a friend, or as a Mahometan, persecutor, outside the pale of a 'Holy Alliance' of Christian kings." The first uprising took place in Roumania on March 6, 1821, under the lead of Hyspanti, a Greek refugee from Russia. The movement was not cordially sustained by the

* "England in the Nineteenth Century," p. 67.

Christian masses, and sympathy for Hyspilanti was promptly disavowed by the Russian czar. The Greeks of the Morea, the old Hellenic peninsula, who more nearly represented the ancient Greek nationality, raised the standard of revolt on April 2, 1821, massacred the Mohammedans wherever they were found, and incited terrible reprisals, involving the murder of the Greek Christians in Constantinople and in Asia Minor. At first the Turkish government showed weakness and inefficiency in putting down the revolt, and the resolute courage of the Greeks in cutting off and destroying the Turkish armies gradually opened the eyes of Europe to their probable success.

The Turkish sultan called upon Mehemet Ali, the pasha of Egypt, to bring his disciplined forces to his aid for the subjugation of Greece. The destruction of the monuments of ancient civilization sent a thrill of horror throughout civilized Europe,



where attention had already been attracted to the heroism of the Greek struggle for freedom by the poetry and the tragic death of Lord Byron. The defense of Missolonghi, which held out for a full year, until the spring of 1826, against the Turkish commander, contributed to raise the character of the Greeks still further in the eyes of the world. Canning, the leader of the English Liberals, succeeded Castlereagh as prime minister and made no secret of his sympathies with the insurgents. Russia, at first hostile to any outbreak of liberalism, but always on the alert to gain ground against Turkey, realized that intervention in Greece was certain to come

from the Western powers and determined to anticipate them. A note proposing a division of Greece into three principalities, with local self-government under the sultan, was addressed to other courts as early as January 12, 1824, and was followed by a treaty signed at London in July, 1827. England, Russia, and France, agreed to intervene to stop the conflict in Greece, and sent the necessary instructions to the admirals of their Mediterranean squadrons.

The time soon came for action. Ibrahim Pasha, the Egyptian commander, son of Mehemet Ali, had entered upon a policy of wiping out the villages and destroying the growing crops throughout the Morea. When a message was sent by the allied admirals to his headquarters at Navarino, word came back that he was absent in the interior. The allied fleets lost no more time. Codrington, the English commander, sailed into the harbor of Navarino at noon on October 20, 1827, followed by the French and the Russians. He met a stubborn resistance. Vessel after vessel of the Egyptians was sunk, and when Ibrahim returned from the interior the next day he found the harbor strewn with wrecks and dead bodies. England drew back from further intervention, but Russia came forward as the avowed friend of the Greeks, attacked Turkey on the Danube, and in Asia Minor, and forced the recognition of Greek independence by the treaty of Adrianople (Sept. 14, 1829). It was several years before orderly government was established in Greece under King Otho (Feb. 1, 1833), but the decisive steps had already been taken to create a modern civilized state where Turkish barbarians had lorded for centuries over the remnants of the highest civilization of antiquity. Greek financial, and political, administration have not been altogether fortunate during seventy years of freedom, but Athens has formed a nucleus for the new life of Greece, which has drawn back many of the most patriotic and successful of her children from all quarters of the world. Rich endowments have restored the monuments of antiquity and created others worthy the taste and splendor of the fountain-head of the art of the world.

The tendency to national consolidation, which has been the dominant note of European history during the century, operated toward the absorption, by other states,

of the ancient kingdom of Poland. This considerable monarchy, divided in the eighteenth century between Russia, Prussia, and Austria, lacked some of the elements of a true national life because of the complete dominance of a feudal aristocracy. The peasants were a subject and oppressed class, and even the small landholders had little share in the government. Alexander I., who was infected with some of the liberal ideas of Napoleon, in the settlements of 1815 recognized the independence of the Duchy of Warsaw, the portion of Poland which had fallen to Russia, and assumed the title of king of Poland. He granted a constitution, creating a separate army, and administration, into which no person not a Pole could enter. The relations were not harmonious, however, between the Poles and their Russian masters, and when some of the former were put on trial for conspiracy against the government, they were acquitted by the senate at Warsaw. The Emperor Nicholas thereupon stationed Russian troops in the country, in violation of the constitution of Alexander. The spirit of discontent smoldered for a time, but finally broke into open revolt at Warsaw (Nov. 29, 1830).

The Poles imagined for a moment that they could accomplish a constitutional revolution which would be accepted at St. Petersburg, or that they could bring the forces of France and other liberal nations to their rescue. A Commission was sent to St. Petersburg to present the demands of the Polish people. Nicholas made it plain that he would have submission or armed conflict. The very messenger who carried back this information to Warsaw found the roads filled with Russian regiments moving on Poland. The Diet passed a resolution declaring that the House of Romanoff had forfeited the Polish crown; but after a desperate contest, the Russian armies which were converging upon the country, united and made their entrance into the capital (September 8, 1831). The constitution of Poland was abolished, its defenders were driven to seek safety in exile or were transported to Siberia, and the country became a province of the Russian Empire. The next rising took place in Galicia in Austrian Poland, in February, 1846, but was largely of an agrarian character, and was quieted by the reorganization of the Austrian land system.



The last despairing outbreak of Polish national spirit occurred in 1863. The Czar Alexander II. was inclined to give Poland a large degree of local self-government, but was not willing to establish a separate legislature and an independent army. His unwillingness to grant all that was desired caused ever-growing irritation instead of gratitude. A levy for the army, in which the Russian officers in Poland were instructed to secure all known to be connected with the disorders in the towns, caused an outbreak which extended into the Russian provinces of Lithuania and Podolia. The war cry of the insurrection, that Poland must be reconstituted with the limits of 1772, including Russian territory which had never been essentially Polish in language nor sympathies, aroused the whole Russian people. When the insurrection had been crushed in the spring of 1864, the czar determined to array the Polish peasant classes against their masters by a drastic policy of liberation, and assignment of land, and empowered his officers to stamp out the souvenirs of Polish nationality by introducing the Russian language, and Russian official methods, into every Polish province. Never since, in spite of smoldering discontent, has there been concerted movement to revive in fact the dream of an independent Poland.

The first half of the nineteenth century drew to a close with few changes in national boundaries from the lines drawn by the four great powers which controlled the Congress of Vienna. Belgium had been created a neutral state between France and Ger-

many, and Greece had become free. These were only minor changes in the map of Europe, and they did not disturb the balance of power, which was the aim of the great powers. The attempt of the Poles to reconquer their independence had been crushed with an iron hand, and the aspirations of the Italian and German peoples for free national life, whose manifestations have yet to be set forth, had seemingly been suppressed by their royal and princely masters. But these aspirations were already working changes in old conditions, which were to lead to a free Italy and a united Germany; to shake the yoke of absolutism from the necks of many peoples, and, by revealing the love of constitutional liberty as the dominant note of modern life, to make it the efficient weapon in the hands of kings and ministers for the creation of a new Europe of powerful nations, knit together by the harmoniously blended sentiments of devotion to the state and to the equality, security, and happiness, insured by rational freedom under national laws.

Narcissus.—In Greek mythology a beautiful youth, son of Cephissus and the nymph Liriope.

Nares, Sir George Strong.—Born, 1831; a noted British Arctic explorer and author.

Narraganset Indians.—A tribe of the Algonquin family of Indians, which originally occupied a part of R. I. They were friendly toward the early colonists, their wars being waged mostly against other tribes. Canonicus, their principal chief, gave Roger Williams a large tract of land and otherwise befriended him. Canonicus died in 1647, and King Philip, of the Pequots, induced the Narragansets to join him in a raid on the white settlement, in violation of their treaty. King Philip and his allies, having ravaged the valley of the Connecticut in 1675 and 1676, returned to the land of the Narragansets. They were surrounded by the whites and their villages were burned. Canonchet, the last chief of the Narragansets, was captured and killed. A few surviving Narragansets intermarried with the colonists and became civilized.

Narragansett Bay.—An inlet of the Atlantic Ocean, indenting the coast of R. I. Length, 27 miles.

Narragansett Pier.—A famous seaside resort in Rhode Island.

Narrows, The.—A strait between N. Y. Harbor and the Lower Bay; it separates Staten Island from Long Island. Width, about 1 mile.

Nasby, Petroleum Vesuvius.—The pen name of D. R. Locke, an American political satirist (1833-1888).

Naseby.—A village near Northampton, England. Scene of the defeat, in 1645, of the Royalists under Charles I. and Rupert, by the Parliamentarians under Fairfax and Cromwell; the decisive battle of the English civil war.

Nash, Richard.—(1674-1761.) A English leader of fashion, called "Beau Nash" and sometimes the "King of Bath."

Nashe, Thomas.—(1567-1601.) An English satirical pamphleteer, poet, and dramatist.

Nashville.—Capital of the state of Tennessee and the largest city in the state; an important railroad center, and has an extensive trade in tobacco, cotton, and lumber. Pop., 80,500.

Nashville (Tenn.), Battle of.—After Gen. Hood had lost Atlanta he marched his Confederate army to the northwestward, crossed the Tennessee

River at Florence, and entered Tennessee. His progress was closely watched by Gen. Schofield who had with him the 4th and 23d corps, about 20,000 men, which had been detached from the army of Sherman. The latter was preparing for his march to the sea. Gen. Thomas, whom Sherman had left in command, was at Nashville, assembling troops from every available source. Hood had about 37,000 men. Thomas directed Schofield to delay Hood's progress as much as possible but to avoid a general engagement. Hood forced him to fight at Franklin but was defeated with great loss. (See FRANKLIN, BATTLE OF.) Schofield fell back to Nashville to join Thomas, and was closely followed by Hood, who invested the city on the south, his flanks resting on the Cumberland River, above and below the city. Two weeks later (Dec. 15-16) Thomas hurled his army upon Hood with irresistible force. On the second day the Federal line swept like a tornado over the entire Confederate line of intrenchments, capturing nearly 5,000 prisoners and above 50 pieces of artillery. Thomas pursued the fleeing and defeated army, but the roads were well-nigh impassable and for days the men and horses of both armies floundered in mud and were deluged with rain. With about 17,000 men—all that remained of the 37,000 with which he had entered Tennessee a few weeks before—Hood succeeded in crossing the river. He marched the remnant of his army to Tupelo, Miss., where he resigned the command. (See HOOD, JOHN B., 295; THOMAS, GEORGE HENRY, 559.)

Nashville Convention.—A convention composed of delegates from all the southern states, held in Nashville, Tenn., in June, 1850, in the interests of slavery, and especially in regard to the so-called encroachments of anti-slavery men. The Wilmot Proviso (which see), and the Missouri Compromise (also see), were disapproved, but the resolutions finally passed were of a temperate nature.

Nast, Thomas.—(1840-.) A noted German-American caricaturist.

Natal.—A British possession in South Africa. It was discovered by Vasco da Gama on Christmas

Day, 1497. It was annexed to the British possessions in 1843. The area is 20,460 square miles and the population 543,913.

Natal.—A British colony in South Africa. Capital, Pietermaritzburg; area 16,570 square miles; pop. about 500,000.

Natick.—A town in Mass., a few miles from Boston. It has manufactures of boots and shoes.

National Academy of Design.—In New York City, instituted in 1826, and incorporated in 1828; its object the cultivation of the fine arts.

National Academy of Sciences.—The National Academy of Sciences was incorporated under an act of Congress, approved Mar. 3, 1863. It was self-created and retains autonomous powers, but derives national character from the provision in the article of incorporation that "the

academy shall, whenever called upon by any department of the government, investigate, examine, experiment, and report upon any subject of science or art, the actual expense of such investigations, examinations, experiments, and reports to be paid from appropriations which may be made for the purpose, but the academy shall receive no compensation whatever for any services to the Government of the United States." The first meeting was held Apr. 22, 1863, and Alexander D. Bache was elected president. The academy holds funds in trust to be applied in aid of scientific investigations or in medals or other prizes for scientific work.

National Airs.—America, in the matter of popular music, is fast acquiring much that is inspiring as well as melodious and pleasing in the depart-

National Debts.—Compiled from the Summary prepared by the Bureau of Statistics, Treasury Department.

COUNTRIES	Year	NATIONAL DEBTS			Revenue	Expenditure	COMMERCE WITH THE UNITED STATES	
		Total	Inter'st Per Cent.	Per Capita			Exports from United States to—	Imports into United States from—
Argentina	1900	\$509,604,444	4½-6	\$128.85	\$63,339,188	\$63,283,632	\$11,558,237	\$8,114,304
Australasia	1900	1,183,055,000	3 -5	263.90	167,335,000	161,738,000	26,725,702	5,468,196
Austria-Hung'ry	1900	1,154,791,000	3 -4	25.80	73,659,000	*73,659,000	7,046,819	9,079,667
Austria	1900	642,194,000	3 -5	24.89	215,237,000	215,208,000	(†)	(†)
Hungary	1900	904,941,000	3 -4	47.75	209,001,000	208,509,000	(†)	(†)
Belgium	1899	504,159,540	2½-3	75.63	85,494,672	83,883,860	48,307,011	12,940,806
Bolivia	1898	2,336,258	4 -5	1.16	3,431,000	3,712,000	59,223	22
Brazil	1898	480,985,000	4 -5	33.56	90,152,000	70,061,000	11,578,119	58,073,457
British Colonies‡	1899	265,511,000	3 -6	26.43	79,956,595	81,071,024	41,011,125	22,687,814
Canada	1900	265,194,000	2½-5	50.59	51,030,000	42,975,000	95,319,970	39,369,074
Chile	1898	113,240,000	4½-5	36.41	13,206,000	38,052,000	3,287,565	7,112,826
China	1899	287,123,500	4½-7	.72	173,500,000	173,500,000	15,259,167	26,896,926
Colombia	1898	15,809,000	3 -5	3.95	7,031,000	8,697,000	2,710,688	4,307,814
Costa Rica	1899	13,124,000	3 -5	43.75	3,513,000	3,180,000	1,462,355	2,980,050
Denmark	1899	55,795,724	3	24.15	19,247,008	20,619,361	18,487,991	920,455
Ecuador	1897	7,882,435	3½-5	6.21	3,564,000	3,020,000	1,216,008	1,524,378
Egypt	1899	500,402,729	3 -4½	53.61	56,424,345	54,437,259	1,095,673	8,278,022
France	1900	5,800,691,814	3 -3½	150.61	691,349,500	691,291,192	83,335,097	73,012,085
German Empire	1900	557,626,622	3 -3½	9.96	471,002,000	489,804,000	187,347,889	97,374,700
German States		2,015,958,000						
Greece	1900	168,548,444	4 -5	69.25	13,650,533	13,626,200	290,709	1,122,855
Guatemala	1899	20,826,507	4 -5	13.23	2,687,000	2,643,000	785,462	2,102,978
Honduras	1899	89,376,920	4 -5	219.60	1,114,429	1,119,295	1,181,453	988,606
India (British).	1899	1,031,603,705	2½-4½	4.67	328,955,934	316,105,507	1,892,323	45,355,976
Italy	1899	2,583,983,780	3½-5	81.11	317,349,332	313,276,071	33,255,620	27,924,176
Japan	1899	206,799,094	4 -5	4.73	121,433,725	119,934,893	29,087,475	32,748,902
Mexico	1900	168,771,428	3 -5	13.36	29,267,131	26,035,775	34,974,961	28,646,053
Netherlands	1899	466,410,294	2½-3	90.74	58,323,000	60,922,000	89,386,676	15,852,624
Nicaragua	1898	4,901,819	4 -6	9.80	1,409,950	1,433,250	1,817,869	1,520,266
Norway	1899	53,211,132	3 -3½	25.08	21,457,420	20,912,308	(**)	(**)
Paraguay	1898	19,972,000	3 -4½	30.45	814,000	892,000	4,884	
Peru	1898	20,321,784	4 -6	4.41	5,914,000	6,072,000	1,662,475	2,122,543
Portugal	1899	670,221,374	3 -4½	143.82	56,363,000	59,207,000	5,886,542	3,743,216
Rumania	1899	280,136,991	4 -5	47.37	28,001,000	29,219,000	41,562	101,042
Russia	1899	3,167,320,000	3 -5	24.56	891,772,000	921,068,000	10,488,419	7,246,981
Servia	1899	81,972,108	4 -5	33.43	15,144,348	14,842,825		
Spain	1899	1,727,994,600	4 -5	95.53	170,998,000	174,752,000	13,399,680	5,950,047
Sweden	1899	85,154,320	3 -3½	16.71	39,043,000	39,043,000	10,436,467	4,244,302
Switzerland	1899	15,919,219	3½	5.10	19,392,000	18,924,000	250,477	17,393,268
Turkey	1899	726,511,195	3 -5	29.25	81,893,462	81,533,341	567,062	7,928,534
United Kingdom	1900	3,060,926,304	2½-2¾	74.83	583,201,360	650,258,113	533,819,545	159,582,401
United States††	1900	1,107,711,257	2 -4	14.52	669,595,430	590,068,371		
Uruguay	1899	124,374,189	3½-5	148.06	16,608,000	16,608,000	1,816,780	1,848,077
Venezuela	1898	37,725,814	4 -5	14.51	6,452,000	8,790,000	2,452,757	5,500,019
Total		\$31,201,759,274		\$24.15	\$5,888,392,563	\$5,875,645,277	\$1,332,308,717	\$750,363,442

* Does not include debt charged nor military expenditures in Bosnia and Herzegovina. † Included with Austria-Hungary. ‡ Estimated. § Except Australasia, Canada, and British India. || From and on account of consolidated fund. ** Included with Sweden. †† Figures for June 30, 1900.

ment of national song. Some songs we have appropriated and adapted, such as the British national hymn, with its stately music—"God Save the King"—which is dear to the American heart, wedded as it now is to the hymn "America," "My Country 'Tis of Thee." Of our own national songs, we have, however, two distinctively good and familiar, in the "Star Spangled Banner" (though the music of it is British) and "Hail Columbia." The latter was written in 1798 by Judge Joseph Hopkinson, of Philadelphia, at the request of a young actor, who wanted a patriotic song adapted to the tune of "The President's March" to sing at a benefit performance. The music to it was composed by Prof. Phylla, musical director at the old John Street theater, New York. Of other American songs the best were written by the late Geo. F. Root, during the early years of the Civil War. The most popular of these are the "Battle Cry of Freedom," "Just before the Battle," and "Tramp, Tramp, Tramp, the Boys are Marching." Good also is the American hymn, written by G. Mathias Keller, first performed at the Peace Jubilee in Boston in 1869. It gained for its writer a prize of \$500 in a contest to which there were many contributors.

Of the national songs of other countries, reference has been made to "God Save the Queen" (or King), the authorship of which is claimed by Henry Carey, an illegitimate son of the marquis of Halifax. Both words and music, tradition assigns to Carey (1663-1743), and were, it is said, first sung in honor of a birthday of George II. at a dinner given by the London Mercers' Co. in 1740. This popular air has since been adopted as the national air of Denmark, Norway, Hanover, Weimar, Bavaria, and Switzerland. The Russian national hymn—one of

the grandest—was composed by Alexis T. Lvoff (1799-1870) at the suggestion of Emperor Nicholas I., and was given in public at Moscow in 1833. "The Marseillaise" of France was written by Joseph Rouget de Lisle at Strasburg, in 1792, and was composed as a Revolutionary song, two years after the fall of the Bastille. Germany's national air, "The Watch on the Rhine," is the work of Carl Wilhelm (1815-75), written in 1854, but it did not come into vogue until the French and German War. Austria's national hymn was composed about the year 1797 by Joseph Haydn, and the words were written to it by the poet Haschka. One of the popular airs claimed by Italy is "Italia, Italia, Beloved," understood to have been composed by Donizetti; and that of Spain, a comparatively recent song, was composed by Manuel Fenollosa.

National Assembly.—In French history, the first of the Revolutionary Assemblies, existing from 1789-91.

National Board of Health.—Congress, by an act approved Mar. 3, 1879, established a National Board of Health, consisting of seven civilian physicians, one army surgeon, one navy surgeon, one surgeon of the Marine Hospital service and one officer of the Department of Justice. This board was later abolished. A national quarantine law was passed June 3, 1879.

National Debts.—See table on preceding page.

National Guard.—The enrolled militia of a number of the states, organized under an act of Congress, is known as the National Guard. In 1891 the enrollment included 92,203 infantry, 4,554 cavalry, 5,224 artillery, and 9,311 commissioned officers,—a total of 111,292. The National Guard of each state is at all times subject to a call from the governor to service only within the state.

NATIONALISM, THE GROWTH OF

THE STRUGGLE FOR THE LIBERATION OF ITALY—PATRIOTIC AIMS OF VICTOR EMANUEL AND CAVOUR—THE HEADSHIP OF PRUSSIA IN GERMANY—BISMARCK AND THE WAR WITH AUSTRIA—THE RECOGNITION OF GERMAN NATIONAL SPIRIT—NAPOLEON III. INVITES WAR OVER THE SPANISH CROWN—VICTORIES OF THE GERMAN ARMIES AND UNIFICATION OF THE GERMAN EMPIRE—THE TURCO-RUSSIAN WAR AND THE LIBERATION OF THE PROVINCES ON THE DANUBE—THE CONGRESS OF BERLIN IN 1878.

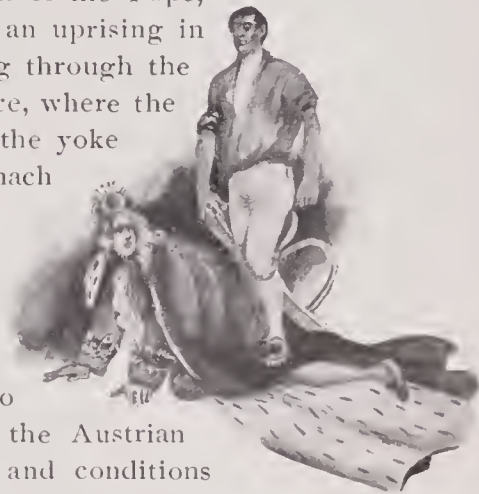
THE history of the second half of the nineteenth century is dominated by the new national spirit which was first aroused to life in the uprising against Napoleon. Two great events mark the history of this epoch,—the liberation of Italy from her petty tyrants and from Austrian bayonets, and the unification of the German Empire, which events brought about the fall of France from the commanding position which she had enjoyed under Louis XIV. and the Great Napoleon, and which she had not wholly lost until Louis Bonaparte, dubbed Napoleon III., surrendered his person and his army to the king of Prussia, at Sedan, on September 2, 1870.

The liberation of Italy, and the union of her small kingdoms and principalities into a vigorous nation, did not come about without much travail. Absolutism reigned supreme on the Peninsula after the downfall of Napoleon and the restoration of Austrian authority, or influence, with the petty Italian princes. The death of the Pope, Pius VIII. (November 30, 1830), came at an opportune moment for an uprising in the Papal States and in other parts of Italy, when Europe was going through the ferment of 1830. The insurgents looked for the moment to France, where the revolution of July had been successful, to aid them in throwing off the yoke of absolutism. But "the Citizen King," Louis Philippe, had no stomach for fighting. The Austrian troops soon stamped out the insurrection in Rome, and France contented herself with joining the other powers in suggesting the reform of abuses under the Papal Government, and the evacuation of the Papal States by the Austrian troops.

Italian patriots waited for the gathering clouds of the revolutionary spirit of 1848 before making another serious effort to secure the unity and freedom of Italy. Neither the Pope nor the Austrian Government carried out any of the reforms promised in 1831, and conditions gradually ripened for a fresh outbreak. Again a change in the Papacy came at a critical moment. Gregory XVI. died, and the new Pope, Pius IX., who was elected (June 17, 1846) over the head of the Austrian candidate, was looked upon with high hopes by Italian reformers. He issued a general amnesty for political offenses, threw open the prison doors, and permitted the enthusiastic people to celebrate festivals in honor of the approaching restoration of Roman liberty. When Austria moved a garrison into Ferrara, within the Papal States (June 17, 1847), the Pope protested against the interference of his nominal protectors. The English and French fleets appeared at Naples, and Charles Albert, the king of Sardinia, announced his intention of taking the field against Austria if war began. A compromise was arranged by the powers, which averted for a brief time a general uprising; but a revolution broke out at Palermo (Jan. 13, 1848) which spread throughout Sicily. King Ferdinand II., in order to save the throne of Naples, was compelled, in imitation of the policy of his predecessor, to proclaim a liberal constitution. Constitutions were granted in Piedmont, and Tuscany, and the Austrian Government woke tardily to the discovery that war would be required to restore its authority in Italy.

Sardinia under her king, Charles Albert, took the lead of the constitutional movement for Italian unity. Lombardy, which adjoined Sardinia, expelled the Austrian troops in March, 1848, while in Venice, the Italian regiments joined the national cause, and the popular leader, Daniel Manin, proclaimed the Republic of St. Mark. But the popular cause soon encountered obstacles. The Italians under Charles Albert were not successful in attempting to drive the Austrians from Verona; while Ferdinand succeeded in crushing the popular movement and dissolving the new constitutional Assembly in Naples. Italy was not yet ready for independence. Charles Albert was defeated in a pitched battle at Custozza (July 25, 1848), and he abandoned Milan in so humiliating a manner as to subject himself for the moment to the suspicion of treachery. The victorious Austrian commander, Radetzky, was halted for a time by fear of French and British intervention, but after an armistice of several months, he delivered another crushing defeat to the Sardinians at Novara (March 23, 1849).

The abdication of Charles Albert, king of Sardinia, was the beginning of a new era in the history of Italy. Charles Albert had endeavored, in his irresolute way, to realize the dream of Italian unity, but he now saw his failure and gave up the crown to his son Victor Emmanuel. The single purpose of securing Italian unity and of throwing off the Austrian yoke, animated the new king and gathered around him



all those who were willing to seek this object by constitutional and diplomatic methods rather than by ill-considered popular uprisings. For the moment the situation was dark. Victor Emmanuel was tempted with promises of territory and prestige for Sardinia if he would suppress the liberal constitution. His firm refusal to do so led to the occupation of Sardinia by Austrian troops, and the exaction of a heavy indemnity; but his position did more to strengthen the House of Savoy in the hearts of Italians than if the government of all Italy had been handed over to him by the Austrian absolutists. In the other provinces, the policy of Austria was carried out. An Austrian garrison supported the grand duke of Tuscany, and Austrian troops were on the point of occupying Rome. They were anticipated by France, but the French met a stubborn resistance from the Roman people and were not able to enter Rome (July 3, 1849) until more than two months after their landing on the Italian coast. Venice was compelled to surrender to the Austrians on August 25, and Sicily was reconquered by Ferdinand of Naples, who worked such violence at Messina that he was stopped by the British and French fleets.

Victor Emmanuel was fortunate in obtaining a prime minister, in 1852, who possessed the same singleness of purpose as himself, and much greater skill in diplomacy. Count Cavour brought Sardinia into the field of European diplomacy for the purpose of liberating Italy. He joined France and Great Britain in sending Sardinian troops to Sebastopol in the Crimean War of 1853,—not because he cared much for the complications in the East, but because he desired to make Sardinia a great power and to secure allies in the West when the time came to strike again against Austria. His plans were realized. Sardinia came to be so obviously the center upon which the hopes of all Italians were fixed that Austria in 1856 sought to recover ground by entering upon a liberal policy. Maximilian, with his charming young bride, was sent to win the affection of the Italians, sequestered estates were restored to their owners, and the Austrian emperor himself went to Milan to proclaim a general amnesty. These reforms, as in the case of those offered by Spain to Cuba in 1895, and 1897, came too late to stay the progress of events. This Sardinian premier took his seat at the conference of the powers in Paris, in 1856, and the Sardinian policy was openly hostile to Austrian tyranny in Italy. When Cavour at last met Napoleon III. at Plombières, in the famous conference of July, 1858, the time had come to realize the results of six years of effort. An agreement was made that Austria should be expelled from Venetia as well as from Lombardy, that Victor Emmanuel was to become the sovereign of northern Italy, including a part of the Papal territory, and that Tuscany was to be erected into a constitutional kingdom in central Italy. France was to lend her support in the field against Austria and was to receive Savoy, and possibly Nice, as her compensation.

Cavour was almost driven to despair at the last moment by the hesitation of Napoleon. A proposal from London, that the powers should agree to a general disarmament, was followed by a dispatch from the French emperor desiring Cavour to consent to the agreement. Nothing but the rashness of Austria gave the Italians an opportunity to fight for their liberation. Austria submitted an ultimatum (April 23, 1859) that Sardinia should separately disarm within three days. Cavour had only to point to his reluctant acceptance of Napoleon's advice of a general disarmament to put Austria in the wrong and to force France to carry out her pledge to fight for Italian freedom. Austrian troops crossed the Ticino on April 29, 1859, and France immediately declared war against Austria. The Austrians were better prepared, and in better strategic positions, than were their opponents; but they hesitated and maneuvered, until the French reached Italy in force and delivered the crushing defeats which became famous as the battles of Magenta (June 4, 1859) and Solferino (June 24). The liberation of Northern Italy was achieved if Napoleon had not yielded to the plea of Francis Joseph, and sur-

rendered a large share of the fruits of victory. It was stipulated that Venetia should remain under Austrian rule, and that Tuscany, and Modena, should continue under their old rulers; but Lombardy was to become a part of the kingdom of Sardinia. The Italian federation which the two emperors set up, including Tuscany, Venetia, and the Papal States, was repudiated by Victor Emmanuel, who declared that he would enter no league of which Austria governed any part.

Cavour was terribly broken up by what the Italians considered the treachery of the French emperor; but the Peace of Zurich (November 10, 1859), by which France made peace with Austria, did not end the movement toward Italian unity. Austria admitted in the spring of 1860 that she would not employ force for the restoration of the sovereigns of Tuscany, and Modena. Tuscany promptly voted for annexation to Sardinia, and the kingdom of Italy extended over all the northern half of the Peninsula except Venetia. Then came the outbreak of revolution in the south under Garibaldi, who at first proclaimed himself dictator of Sicily and Naples, in the name of Victor Emmanuel, but was soon compelled to submit to the union of Naples with Sardinia. In the spring of 1861, Italy, with the exception of Rome, and Venice, was thus united under Victor Emmanuel. Venice fell to the new kingdom in the short and decisive campaign of 1866, in which Prussia brought Austria to her knees. It was necessary to wait until 1870, for the collapse of the French Empire, before the Italian troops entered Rome, brought to an end the temporal power of the Pope, and established in the ancient capital of the world the capital of united Italy.

The unity of Germany was achieved with less bloodshed at home than the liberation of Italy, but was not brought about without political conflicts and much delay. Prussia fell under the influence of Austrian absolutism after the downfall of Napoleon. The union of the courts of Austria and Prussia threatened such a predominance for these two large states, apparently united upon the policy of absolutism, that the minor courts were driven to encourage separatist ideas as far as possible, as a counterpoise to the policies of the great powers. The first fruitful step toward the union of North Germany was taken when Prussia entered upon the policy of customs unions. Political objects were carefully disavowed, but a series of commercial treaties between 1828 and 1836 laid the foundations for the *Zollverein*, or German Customs Union, which gradually removed the vexatious charges upon commerce at the boundaries of each petty state, and permitted the free development of trade and manufactures within the union. Prussia not only made her absolutism at home more tolerable by this contribution to the wealth and development of Germany, but drew around her the sympathy and support of all the German states, by the commercial benefits which each found in union with the others.

The revolutionary troubles of 1848 revived among the liberals the hopes for a united Germany, and led King Frederick William IV. to seize upon this sentiment as a means of regaining the popularity which he had lost by his hesitation in adopting a liberal policy at home. He issued a proclamation (March 21, 1848), declaring that he had placed himself at the head of the German nation, for protection from attack from without and for the spread of liberal ideas at home. When the plans were carried forward, however, for a German national assembly, and the crown of the German Empire was offered to the Prussian king (March 28, 1849), Frederick William put the crown away, upon the ground that it should be offered by the princes of Germany and not by the direct representatives of the people. The constitution which had been drawn up, giving a liberal government to the Empire, was thus put aside with the crown, and the national assembly, upon which high hopes had rested, came to an end without material results. The sessions, originally held at Frankfort, were adjourned to Stuttgart, where, after a vain effort to arouse public sentiment in favor of a liberal government, the

remnants of the delegates were dispersed by the troops of the king of Württemberg (June 18, 1849).

Austria was jealous from the first, both of the project of popular government and of the formation of a union which might weaken her power over Southern Germany. She insisted that the old federal constitution was still in force, and called a Diet at Frankfort (September, 1850). An issue was made with Prussia which forced the Prussian king to the humiliation of accepting the whole program of Schwarzenberg, the minister of Austria, and the abandonment of the leadership of Germany. The issue was raised as to the right of Prussia to send troops into Hesse-Cassel for the protection of the people in their constitutional rights. Austria secured an appeal by the Elector of Hesse-Cassel to the Diet, and was authorized to intervene in his behalf. Prussia at first disputed the authority of the Diet and claimed to act as the representative of the German states. The matter was referred to the Czar Nicholas, of Russia, who decided in favor of all the demands of Austria. Austria seemed upon the point of attaining the headship of all Germany, thanks to the reactionary and cringing incompetence of the Prussian king, until she was brought to a halt by the Western powers, who could not look with indifference upon the creation of a nation of 70,000,000 of people in the heart of Europe. The humiliation of Prussia and North Germany was completed when the national fleet which had been gathered to enforce German interests against Denmark was sold at auction in the summer of 1852, because the national German union no longer existed.

It remained for the genius and iron will of a single man to give direction to the aspirations of the German people for federal union. That man, in early life a reactionist of the most extreme type, who had openly sneered at the reformatory movements of 1848, seemed the least fitted of German public men for the task which was to be carried out. But Herr von Bismarck fixed his eye resolutely upon the making of Prussia a great state; he was willing to override parliaments and minor states, and to take the chances of war with Europe in order to accomplish his ends. The enthusiastic military genius of William, while regent from 1858 to 1861 (king, January, 1861), did much to put the Prussian army upon the basis of the highest fighting efficiency. The term of service of the younger conscripts was extended, and the king, Bismarck, and Roon, the minister of war, persisted, in the face of violent protests by the lower chamber of the Prussian assembly, in the necessary expenditures for a large and well-drilled force.

Bismarck and Roon soon found an opportunity for testing the efficiency of their military machine in extending the territory and the prestige of Prussia. A dispute, dating back some twenty years, regarding the rights of the king of Denmark over the semi-German Duchies of Schleswig and Holstein, afforded an opportunity for intervention. Through the skill of Bismarck, Austria was used as a cat's-paw for carrying out the purposes of Prussia. She was drawn into a combination which alienated from her the sympathy of the smaller states and left the fruits of success to be garnered by her northern rival. Austrian and Prussian troops entered Schleswig (February 1, 1864), Denmark was overrun, and after some fruitless negotiations, Austria was assigned the administration of Holstein, and Prussia that of Schleswig, by the convention of Gastein (August 14, 1865).

Bismarck had already intimated to the Austrian ambassador at Berlin that if Austria did not transfer her political center to Pesth, and leave free scope in Germany to Prussia, she would find Prussia on the side of her enemies in the next war in which she might be engaged. Bismarck proposed to oust Austria from North Germany, but it was necessary to bide his time and insure the support or neutrality of other powers. Italy, in her desire to liberate Venetia, was the natural ally of Prussia against Austria, but Italy could not afford to fight without the consent of Napoleon III. This was obtained

by Bismarck in a conference with the French emperor at Biarritz, at which Napoleon's dream of extending the French frontier to the Rhine apparently dazzled his hopes to the point of allowing him to accept ambiguous hints for definite promises. The ground was thus cleared for a treaty with Italy (April 8, 1866), by which she agreed to fight Austria, if within three months Prussia took up arms for the reform of the federal system of Germany. The pretext was soon found in the encouragement of revolutionary demonstrations by Austria, in Holstein, and in her attempt to refer the Schleswig-Holstein question to the Federal Diet. When Austria obtained from the Diet the mobilization of the Federal armies on her behalf, Prussia declared the existing union at an end, and war began (June 12, 1866).

Liberal opinion in Germany did not cordially support the war at first, because the causes were considered trivial, and there was little belief in the sincerity of Count Bismarck. The army, however, was in splendid fighting condition and promptly overran Saxony, which was acting with Austria. General Moltke, the chief of staff, directed the operations of three Prussian armies by telegraph from Berlin, and converged their forces with wonderful precision around the Austrians until the time was at hand for the final move. The Austrian commander saw that the campaign was lost, but was compelled to face the combined Prussian armies at Königgrätz near Sadowa (July 3, 1866). The Austrians were badly beaten and succeeded in escaping only with the loss of 18,000 killed and wounded, and 24,000 prisoners. The Austrians had been winning some successes against the Italians, but their effect was not sufficient to neutralize the disasters in the North. The Prussians, while dallying with the proffered mediation of Napoleon III., pushed on toward Vienna. An armistice was arranged and by the Peace of Prague (August 23, 1866), Austria was compelled to accept Bismarck's proposition, that she withdraw completely from German affairs, that north Germany and Saxony be brought into a confederation under Prussian leadership, and that the south German states should have the right of entering into a national bond with the northern league. The Southern states, although at war with Prussia, were granted easy terms of peace, and were drawn permanently toward the northern confederation when Bismarck disclosed to them the proposals of Napoleon III. for the annexation of parts of southern Germany to France. These disclosures aroused the national spirit of the people of south Germany and were sufficient to enable Bismarck to obtain secret treaties, promising to place the forces of the Southern states at the command of Prussia in case of war.

It remained for the folly of the French emperor, now weakened in body and in intellectual power, to afford the occasion for cementing in blood the union of modern Germany. Already shorn of his prestige by the ill-fated expedition to Mexico and the humiliating withdrawal of the French troops, at the mandate of the United States, Napoleon seemed to be seeking an opportunity to win glory abroad in order to avert revolution at home. He had been misled, perhaps through his own fault, in his negotiations with Bismarck for dividing Belgium and the Rhine countries and had come away empty-handed from his recent diplomatic encounters. He sought at first to annex Luxemburg, but the outburst of German national feeling defeated the treaty which the king of Holland was willing to make. All that he was finally able to accomplish was a conference of European powers, which declared Luxemburg neutral territory, and which secured the withdrawal of the Prussian garrison. France and Prussia began to drift toward war, in spite of the secret misgivings of the French emperor,—France driven forward by exasperation against the growing power of Prussia, and the Prussians eager to test again the efficiency of their splendid army in extending the prestige of their country.

The occasion for war came in a manner which put France distinctly in the wrong in the court of public opinion. The throne of Spain had become vacant by the expulsion

of Queen Isabella. General Prim, the leader of the revolution, offered the crown to Prince Leopold of Hohenzollern-Sigmaringen. This house was distantly connected with the reigning family of Prussia, and the father of Prince Leopold had been prime minister of Prussia in 1859. France was prompt to resent the extension of German influence over Spain. A storm of indignation broke out in Paris when it became known that Leopold had consented to accept the crown if the Spanish Cortes should confirm his election (July 3, 1870). Instructions were at once sent to Benedetti, French minister at Berlin, to demand a pledge from the king of Prussia that Leopold should not be permitted to accept. The menace of war seemed to be removed for a moment when Leopold announced his withdrawal from the candidacy. But the Duke of Gramont, the French minister of foreign affairs, seemed bent upon a breach. He instructed Benedetti to demand from the king of Prussia a guarantee against the renewal of the candidacy of Leopold. The king refused to see the French ambassador, the latter quitted Ems, where he had sought the interview, and the French cabinet, late in the evening of July 14, decided upon war with Prussia. The Liberals in the French chambers held power by a precarious tenure and did not dare oppose what seemed to be the will of the nation.

The war that followed fully justified the confidence of Bismarck and Moltke in the efficiency of the Prussian army and in the care with which the plans had been laid, distances measured, and resistance anticipated. But the breakdown of the French army was a surprise to the world. The moral dry-rot, which had permeated the governing classes of France, seemed to have taken the heart out of the army as completely as fraudulent contracts and incompetent officers had impaired its fighting force. The French troops, directed by Napoleon himself, were scattered along the frontier without any visible plan of action or unity of purpose. They encountered their first defeat at Saarbrücken (August 2, 1870). Two days later, the German crown prince, Frederick Charles, crossed the Alsatian frontier and crushed the French at Weissenburg. The conflict had begun with a strange mockery of the cries of "On to Berlin," with which the Parisian populace three weeks before had greeted the declaration of war. The Germans were on the straight road to Paris, where revolution was already breaking out in the early days of August. Within less than a month they forced the French back to the Meuse, and cooped them up in an arc of fire at Sedan. Napoleon was compelled to display the white flag and to treat with King William for the surrender of the whole French army (December 2, 1870).

After the yoke of the Napoleonic dynasty was thrown off, the French nation was partially aroused. Paris was defended for many months, but the growing deficiency in the food supply compelled capitulation (Jan. 28, 1871) and the Prussian flag waved over the forts of the French capital. While the war was still going on, Bismarck had availed himself of the enthusiasm aroused throughout Germany to bind closer the bonds of a united nation. In September, negotiations were opened with each of the South German states for entry into the Northern Confederation. The king of Bavaria was forced by the course of events, and by the maneuvers of Bismarck, to address a letter to his fellow-sovereigns, proposing that the king of Prussia should assume the title of German Emperor. The project was accepted by the other small states, and on January 18, 1871, King William assumed the title of German Emperor; the ceremony taking place in the midst of his officers, in the Hall of Mirrors of the Palace of Versailles, whose walls had reflected the splendors of Louis XIV. and his successors, and whose great paintings portrayed so many scenes which had shed luster on the glories of France. The German Empire had become a dominant factor on the European continent, and France, struggling in the throes of revolution at home and disaster abroad, was almost erased from the list of first-class powers.

The victory of Germany over France was not followed by any further effort to extend German power at the price of blood. Prussia had been generous with Austria after Sadowa, in refraining from annexing any territory distinctly Austrian. Bismarck, after the war with France, held out the olive branch to Austria, upon the one condition that the latter should frankly recognize the supremacy of Prussia in the German Empire, and should cease interference in the affairs of Germany. Russia had been placed under obligations to Germany in matters growing out of the Crimean War and had refrained from interfering in later conflicts. Bismarck now got together the three emperors with their ministers at Berlin. Conferences were held in the summer of 1872, whose results were not embodied in formal treaties of alliance, but which led to an understanding that was properly known as the "League of the Three Emperors." The spirit of revenge which was cherished in France because of the disasters of 1870, was thus held at bay by the knowledge that she would have to fight the three Empires if she took up the sword.

The next conference at Berlin, in 1878, was occasioned by problems arising in a different quarter of the world, but was again an outgrowth of the spirit of nationality which was making over the map of Europe. The European provinces of Turkey, harassed by the worst possible forms of misgovernment and oppression, had been seeking for many years to follow the glorious example of Greece in throwing off the Turkish yoke. Weak in themselves against the fanatical fighting power of the Turkish army, they were still further discouraged by the effort of the great powers to maintain an equilibrium which should prevent Russia from extending her own power by aiding them. Great Britain, in the face of the generous instincts of the masses of her people, was compelled by her distrust of Russian purposes to support the integrity of Turkey against her Christian subjects, in the belief that even governments independent in name would fall under the dominating influence of the great power of the North. The Crimean War of 1853-55 grew out of the efforts of Great Britain and France to resist the interference of Russia in European Turkey, and its results left Eastern affairs in an unsatisfactory condition. Moldavia and Wallachia, kept apart by the policy of the powers in the treaty of Paris which followed the war, showed their determination to form a united kingdom of Roumania by electing the same prince for their dual government. They were nominally subject to the sultan, but only to the extent of a fixed annual tribute.

The arrangements of 1858 did not long survive. The Turkish provinces of Bosnia and Herzegovina rose in revolt in 1861; the tributary state of Servia expelled its Turkish garrisons with little resistance in 1863, and Crete rose in rebellion. The Turkish Government, in the meantime, made no effort to carry out the reforms promised in 1858, and matters went from bad to worse in all the Christian provinces of Turkey. A revolt broke out in Herzegovina in the summer of 1875, and while the powers were dickering with the Turkish Government about reforms, the world was appalled by the atrocities committed by the Turkish irregular troops in putting down insurrection in Bulgaria. Servia and Montenegro declared war upon Turkey (July 2, 1876) and Russia prepared to go to the aid of the Turkish Christians. A memorandum adopted at Berlin and known as the Andrassy Note, proposing religious liberty and local self-government in Bosnia and Herzegovina, was presented to the Turkish Government January 31, 1876, but failed to receive the approval of Great Britain. The three emperors got together at Reichstadt (July 8) and prepared a treaty which would have divided the Christian provinces between Russia and Austria. The Servians, in the meantime, suffered serious defeats and Russia stepped firmly to the front as their protector. There was further consultation among the powers, which resulted in united demands for reforms, and for the execution of such reforms under the superintendence

of an international commission, as a safeguard against Turkish bad faith. The Turkish Government, although warned by Great Britain against obstinacy, rejected all these propositions, and Russia declared war (April 24, 1877).

The Russian army crossed the River Pruth, forming the boundary of Moldavia, and soon reached the Danube (June 27). For a time the Russian advance was easy and uninterrupted, but before the heights of Plevna, the Russian armies were brought to a halt which taught them that if the capacity for civil government did not exist among the Turks, their capacity for hard fighting remained unimpaired from the time of the great invasions. The first Russian attack was repulsed (July 20), and a second assault (July 30) was beaten back, leaving a fifth of the Russian force disabled on the field. The Russians hurriedly brought up additional forces and made a new attack in force, under the eye of the czar (September 11-12). Skobelev, one of the most intrepid of the Russian generals, carried a single outwork, but at every other point the Russians were beaten back with a courage and resolution which attracted the reluctant admiration of the civilized world. Todleben the aged defender of Sebastopol twenty years before, was drawn from his retirement to take charge of Russian operations and finally compelled the Turkish commander to surrender, not by force of arms, but by the slow process of starvation (December 10, 1877). The remainder of the Russian progress was comparatively unopposed. The Russian army reached Adrianople January 20, 1878, and the Turks eagerly consented to an armistice (January 31, 1878).

The game of international politics had now to be played before a settlement was reached of the affairs of the Christian provinces. Russia concluded peace with Turkey at San Stefano (March 3, 1878), on terms most favorable to the Christian populations. Great Britain insisted that the treaty affected the balance of power in Europe and should be submitted to an international conference. A secret treaty in the meantime assured the Turkish sultan of the support of British arms in case of further aggression by Russia upon his Asiatic territory. Great Britain obtained Cyprus as the price of these assurances. Russia did not dispute the right of the powers to be consulted on the final adjustments growing out of the war. An international Congress was held at Berlin, which materially cut down the territorial limits of the proposed tributary state of Bulgaria in order to create a defensible Turkish frontier at the Balkans. The severed province of eastern Roumelia was never occupied, however, by Turkish troops, and when the people declared, in 1885 for union with Bulgaria, none of the powers intervened to prevent. The independence of Roumania, Servia, and Montenegro was acknowledged by the Turkish Government, and Bosnia, and Herzegovina were placed under the administration of Austria. A part of the Greek provinces of Thessaly and Epirus was annexed to Greece. Two important points achieved by Great Britain were the cutting down of the limits of Bulgaria, which, as fixed by the treaty of San Stefano, cut into the heart of what was left of European Turkey, and the maintenance of Batoum as a free port. The latter harbor, transferred from Turkey to Russia, was important as the gateway of the trade of the Orient, and Great Britain was particularly desirous that it should not be closed by the Russian tariff. The enduring result of the war, however, from the standpoint of European national life was the creation of three independent Kingdoms,—Roumania, Servia, and Bulgaria,—each governed under constitutional forms by its own people and having a separate system of diplomacy, finance, and internal administration.

Nationality.—The nationality of persons in the U. S. is determined by Federal law, not by state enactment. As the loss or acquisition of citizenship is not provided for by the constitution, it is governed by the common law. All persons born within the U. S. are endowed with nationality. By the naturalization act of 1790, children born of American parents in foreign lands are Americans, but the act of 1855 restricted this to children whose fathers were citizens. "All persons born in the U. S. and not subject to any foreign power," are, by the civil rights act of 1866 declared citizens of the U. S. The 14th amendment defines citizens as "all persons born or naturalized in the U. S. and subject to the jurisdiction thereof." (See NATURALIZATION.)

National Museum.—Established at Washington by act of Congress in 1877, for the preservation and exhibition of government scientific collections such as those in natural history, ethnology, etc. The building was erected in 1889. The secretary of the Smithsonian Institution is keeper of the National Museum.

National Parks.—Tracts of territory exempted from sale and set aside by Congress for the use of the people, because of scenic beauty or historic associations. The principal districts thus reserved are the Yellowstone region and the Yosemite Valley. The latter, including the Mariposa Big Tree Grove, was made a national park by act of Congress in 1864, and granted to the state of Cal., on condition that it be forever set aside for public use. It is about 155 miles from San Francisco, is six miles long, and about a mile in width, and its perpendicular depth is about a mile, though it lies 4,000 ft. above the level of the sea. Yellowstone Park, reserved in 1872, includes an area of about 4,480 sq. miles, lying in Id., Mont., and Wyo. Its general elevation is about 6,000 ft. Columns of basalt 1,000 ft. high, acres of miniature volcanoes, giant geysers intermittently spouting columns of hot water and steam hundreds of feet into the air from basins of fantastic shapes and vivid colorings, the Gardner River plunging through a forbidding black hole into the Grand Canyon 2,000 ft. below, and on every side mountains towering 10,000 to 12,000 feet, all combine to furnish scenery of unspeakable grandeur. Three tracts of land in Tulare Co., Cal., containing giant trees, were reserved in 1890 for a national park. The same year Congress set aside a park of 1,500 acres along the picturesque Rock Creek, in the District of Columbia, half the cost being paid by the people of Washington and half by the U. S. Adjoining it is the National Zoölogical Park. Congress has also reserved the battle grounds of Gettysburg, Chickamauga, Shiloh, Vicksburg, and others, as national military parks.

National Party.—A name of the Greenback-Labor party.

National University.—Several of the Presidents have recommended in their messages the establishment of a national university. Washington

disapproved of foreign education for American youth, and early conceived the idea of such an institution. He bequeathed 50 shares of the Potomac Company toward fund for such a purpose, but the stock proved valueless, for the enterprise was abandoned. Several times since Washington's day attempts have been made to set on foot such an enterprise, but up to this year (1902) it has not advanced beyond the theoretical stage.

Natural Bridge.—A limestone arch crossing a small river in Rockbridge Co., Va. Height of arch, 215 feet.

NATURALIZATION LAWS OF THE U. S.—

THE conditions under and the manner in which an alien may be admitted to become a citizen of the United States are prescribed by Section 2, 165-74 of the Revised Statutes of the United States.

DECLARATION OF INTENTIONS.—The alien must declare upon oath before a circuit or district court of the United States or a district or supreme court of the Territories, or a court of record of any of the States having common law jurisdiction and a seal and clerk, two years at least prior to his admission, that it is, *bona fide*, his intention to become a citizen of the United States, and to renounce forever all allegiance and fidelity to any foreign prince or state, and particularly to the one of which he may be at the time a citizen or subject.

OATH ON APPLICATION FOR ADMISSION.—He must at the time of his application to be admitted declare on oath, before some one of the courts above specified, "that he will support the Constitution of the United States, and that he absolutely and entirely renounces and abjures all allegiance and fidelity to every foreign prince, potentate, state, or sovereignty, and particularly, by name, to the prince, potentate, state, or sovereignty of which he was before a citizen or subject," which proceedings must be recorded by the clerk of the court.

CONDITIONS FOR CITIZENSHIP.—If it shall appear to the satisfaction of the court to which the alien has applied that he has made a declaration to become a citizen two years before applying for final papers, and has resided continuously within the United States for at least five years, and within the state or territory where such court is at the time held one year at least; and that during that time "he has behaved as a man of good moral character, attached to the principles of the Constitution of the United States, and well disposed to the good order and happiness of the same," he will be admitted to citizenship. If the applicant has borne any hereditary title or order of nobility, he must make an express renunciation of the same at the time of his application.

SOLDIERS.—Any alien of the age of twenty-one years and upward who has been in the armies of the United States, and has been honorably discharged therefrom, may become a

Naturalization Laws of the U. S.—Continued

citizen on his petition, without any previous declaration of intention, provided that he has resided in the United States at least one year previous to his application, and is of good moral character. (It is judiciously decided that residence of one year in a particular state is not requisite.)

MINORS.—Any alien under the age of twenty-one years who has resided in the United States three years next preceding his arriving at that age, and who has continued to reside therein to the time he may make application to be admitted a citizen thereof, may, after he arrives at the age of twenty-one years, and after he has resided five years within the United States, including the three years of his minority, be admitted a citizen; but he must make a declaration on oath and prove to the satisfaction of the court that for two years next preceding it has been his *bona fide* intention to become a citizen.

CHILDREN OF NATURALIZED CITIZENS.—The children of persons who have been duly naturalized, being under the age of twenty-one years at the time of the naturalization of their parents, shall, if dwelling in the United States, be considered as citizens thereof.

CITIZENS' CHILDREN WHO ARE BORN ABROAD.—The children of persons who now are or have been citizens of the United States are, though born out of the limits and jurisdiction of the United States, considered as citizens thereof.

CHINESE.—The naturalization of Chinamen is expressly prohibited by Section 14, Chapter 126, Laws of 1882.

PROTECTION ABROAD TO NATURALIZED CITIZENS.—Section 2000 of the Revised Statutes of the United States declares that "all naturalized citizens of the United States while in foreign countries are entitled to and shall receive from this Government the same protection of persons and property which is accorded to native-born citizens."

THE RIGHT OF SUFFRAGE.—The right to vote comes from the state, and is a state gift. Naturalization is a Federal right and is a gift of the Union, not of any one state. In nearly one-half of the Union aliens (who have declared intentions) vote and have the right to vote equally with naturalized or native-born citizens. In the other half only actual citizens may vote. (See Table of Qualifications for Voting in each state, on another page.) The Federal naturalization laws apply to the whole Union alike, and provide that no alien may be naturalized until after five years' residence. Even after five years' residence and due naturalization, he is not entitled to vote unless the laws of the state confer the privilege upon him, and he may vote in several states six months after landing, if he has declared his intention, under United States law, to become a citizen.

INHABITANTS OF THE NEW INSULAR POSSESSIONS.—The inhabitants of Hawaii were declared to be citizens of the U. S. under the act

of 1900 creating Hawaii a territory. Under the U. S. Supreme Court decision in the insular cases, in May, 1901, the inhabitants of the Philippines and Porto Rico are entitled to full protection under the Constitution, but not to the privileges of U. S. citizenship until Congress so decrees, by admitting the countries as states or organizing them as territories.

Nature's Barometers.—Certain movements on the part of the animal creation before a change of weather appear to indicate a reasoning faculty. Such seems to be the case with the common garden spider, which, on the approach of rainy or windy weather, will be found to shorten and strengthen the guys of his web, lengthening the same when the storm is over. There is a popular superstition that it is unlucky for an angler to meet a single magpie, but two of the birds together are a good omen. The reason is that the birds foretell the coming of cold or stormy weather, and at such times, instead of searching for food for their young in pairs, one will always remain on the nest. Sea-gulls predict storms by assembling on the land, as they know that the rain will bring earthworms and larvæ to the surface. This, however, is merely a search for food, and is due to the same instinct which teaches the swallow to fly high in fine weather, and skim along the ground when foul is coming. They simply follow the flies and guats, which remain in the warm strata of the air. The different tribes of wading birds always migrate before rain, likewise to hunt for food. Many birds foretell rain by warning cries and uneasy actions, and swine will carry hay and straw to hiding-places, oxen will lick themselves the wrong way of the hair, sheep will bleat and skip about, hogs turned out in the woods will come grunting and squealing, colts will rub their backs against the ground, crows will gather in crowds, crickets will sing more loudly, flies come into the house, frogs croak and change color to a dingier hue, dogs eat grass, and rooks soar like hawks. It is probable that many of these actions are due to actual uneasiness, similar to that which all who are troubled with corns or rheumatism experience before a storm, and are caused both by the variation in barometric pressure and the changes in the electrical condition of the atmosphere.

Naugatuck.—A town in Conn. Pop. (1900), 10,541.

Nausett Beach.—A long stretch of beach on the eastern coast of Cape Cod, Mass.

Nautilus, The.—See MOLLUSK, 2716.

Nauvoo.—In Ill. A town in Hancock Co., on the Mississippi River; founded in 1840 by the Mormons, who were driven out in 1846.

Navajo Indians.—An important tribe of the southern division of the Athapascan stock of Indians. From the time of their earliest discovery by the whites, they have occupied the country along the south of the San Juan River, in northern N. Mex. and Ariz., and extending into Col. and Utah. They were surrounded by the Apache

tribes except on the north, and the Shoshones were their neighbors. The Navajos are at present confined to the Navajo reservation in Utah, N. Mex., and Ariz.

Naval Academy.—An institution for the training of naval officers, founded at Annapolis, Md., in 1845, through the efforts of George Bancroft, then secretary of the navy. It is under the immediate control of an academic board, consisting of a superintendent, who is a naval officer, a commandant of cadets, and the heads of the different departments of study, who are, with one exception, naval officers. One naval cadet is allowed for each member of the House of Representatives, and by presidential appointment, one from the District of Columbia and ten from the country at large. The requirements for admission to the academy are a robust constitution, freedom from physical defects, age between 15 and 20 years, and a knowledge of the ordinary English branches. If admitted, each cadet is obliged to sign an agreement to serve in the navy eight years and make a deposit of \$200 to cover the cost of outfit. They receive \$500 each per year, but are required to pay for their subsistence, clothing, etc. The first three years all the cadets pursue the same course of study, but in the fourth year the cadets destined for the "line" division pursue a course in seamanship, ordnance, gunnery, infantry, tactics, navigation, surveying, compass deviation, and international law; while those who expect to serve in the engineer division take a course of instruction in marine boilers and engines and in designing machinery.

Naval Militia.—In 1888 Congress passed an act authorizing the maritime states to organize a

naval reserve, to be trained and fitted for operating the coast and harbor defense vessels, etc., in time of war thus liberating the regular naval force to man the heavy seagoing war vessels. Mass. was the first state to pass laws providing for such an organization. N. Y. took similar action, and in 1898 most of the seaboard states had regularly organized naval militia. The first appropriation for the equipment of the force was \$25,000, made by Congress in 1891.

Naval Observatory.—A Government institution founded at Washington in 1842 and under the supervision of the Navy Department. It has published many volumes of astronomical observations, and since 1855 an annual nautical Almanac. Important discoveries have been made by its 26-inch equatorial telescope, notably Asaph Hall's discovery of the satellites of Mars.

Naval War College.—An institution established by the Government at Coasters' Harbor Island, Newport, R.I., in 1889, giving a course of lectures on an instruction in the manipulation of torpedoes. The course is chiefly in the torpedo science, but lectures are delivered on all branches of naval improvement and progress. It continues three months of each year.

Navarino, Battle of.—Fought Oct. 20, 1827; the English, French, and Russian fleets, united for the protection of Greece entered the harbor of Navarino and destroyed the Turkish-Egyptian fleet.

Navarre.—An ancient kingdom which comprised the modern province of Navarre in Spain and a part of the department of Basses-Pyrénées in France.

Navesink, Highlands of.—A range of hills on the eastern coast of N. J., near Sandy Hook.

Navies of the World's Powers, Their Number, Men, and Cost.—The following table gives full details of the various vessels which make up the navies of the world; the number of the men who man them, and their cost:—

DESCRIPTION OF VESSELS, &C.	BRITAIN	FRANCE	RUSSIA	GERMANY	ITALY	JAPAN	UNITED STATES
Battleships:							
1st Class.....	38	13	15	14	7	6	17
2d Class.....	11	10	10	..	5	..	..
3d Class.....	6	11	5	13	2	1	1
Ineffective.....	16	6	..	2	3	..	..
Coast Defense.....	3	14	4	11	..	1	10
Armored Cruisers:							
New type.....	20	20	4	3	6	6	8
Old type.....	9	..	4	..	1	..	..
Cruisers:							
1st Class.....	21	3	8	1	..	..	5
2d Class.....	54	18	2	8	4	10	16
3d Class.....	44	13	3	17	11	6	5
Torpedo Gunboats.....	34	21	9	4	17	2	..
Destroyers.....	113	20	35	18	13	12	20
Large Modern Torpedo Boats....	16	165	65	50	94	24	30
Submarines.....	..	12	..	..	1	..	7
Liners, 20 knots and over.....	5	5	6	5	..	..	4
Cost: millions £ and dec.....	27.5	12.5	9.2	7.5	4.5	2.	15.2
Men.....	114,880	48,000	53,000	32,000	24,000	12,000	22,000
Reserves.....	40,000	100,000	50,000	50,000	30,000	25,000	6,000

Navigation Act.—An important move in England's struggle with the Dutch for possession of the carrying trade of the world. The act was first

promulgated in 1645, amplified in 1650, and renewed with a few changes by Charles II. in 1660. It relates to five subjects: coasting trade, fish-

eries, commerce with the colonies, commerce with European countries, and commerce with Asia, Africa, and America. The clauses of importance to American history were those providing that all colonial trade should be carried on in ships built and owned in England and the colonies, and that in the case of many specified goods trade should be confined to English markets. The former clause acted as a powerful stimulant to colonial shipbuilders. The act was rendered largely inoperative by the prevalence of smuggling, and the efforts of Great Britain to enforce it were among the leading causes of the Revolution.

Navigation Laws.—The Constitution gives Congress power to pass navigation laws in accordance with the principles of international law. By act of 1789 a tonnage tax of six cents per ton was levied on all American vessels, and one of 50 cents a ton on all vessels built and owned in foreign countries and entering American ports. In 1792 an act requiring American registrations was passed. In 1793 the coasting trade was closed to foreign vessels. In 1816, 1817, and 1820 the American navigation laws were remodeled and made to correspond closely to those of Great Britain. Tonnage taxes, which had been abolished, were renewed at the outbreak of the Civil War.

Navy.—During the Revolution this country had practically no navy. At the end of 1775 the Continental Congress began the construction of a navy by ordering 13 frigates to be built. These performed some service but most of the achievements of the war were by privateers. By 1781 all of the 13 Federal vessels had been either captured or destroyed. In 1797 and 1798, in anticipation of war with France, Congress authorized the construction of the "Constitution," "United States," and "Constellation," and the purchase of 24 vessels. Hostilities with France were averted however, and at the outbreak of the war with Great Britain in 1812, the U. S. had about a score of vessels, three of which were first-class frigates—the "Constitution," "President," and "United States." The brilliant careers of American vessels during that war secured increased naval appropriations. In 1816 \$1,000,000 annually for eight years was appropriated. By the law of 1819 the navy was largely increased and the vessels were divided among four squadrons and stationed in the Mediterranean, Pacific, West Indies, and off the coast of Brazil. In 1841 an additional squadron was ordered to cruise along the coast of the U. S. During the Mexican War the navy did effective service. At the outbreak of the Civil War in 1861 the U. S. had only 40 ships in commission. The character of warfare was at this time changed by improved armament. The old wooden vessels became useless when opposed by modern guns of long range and heavy caliber. The turreted ironclad was born of this emergency. A new navy had to be constructed in order to maintain the blockade of southern ports, and by Jan. 1, 1864, the national govern-

ment had over 600 vessels, 75 of which were ironclads, with about 4,600 guns and 35,000 men. After the war the navy was reduced to a peace footing. Notwithstanding the appropriation of large sums of money, 1882 found the U. S. in possession of only 140 vessels, and more than 100 of these were incapable of sea service. Soon after this date a new policy regarding the navy was inaugurated and has since been pursued with credit and honor to the nation. In 1899 the navy consisted of 4 first-class battleships, 1 second-class battleship, 2 first-rate armored cruisers, 3 first-rate and 12 second-rate protected cruisers, 9 unprotected cruisers, 1 first-rate and 5 second-rate double turret monitors, 12 third-rate single turret monitors, 16 third-rate and 3 fourth-rate gunboats, 1 harbor defense ram, 1 dispatch boat, 1 dynamite cruiser, 16 torpedo boats, 39 tugs, 1 training ship, 6 receiving and 6 sailing ships. From this period to the present (1902) the navy has developed to a wonderful magnitude, in armament, displacement, speed, durability, and efficiency. It now consists of: armored vessels, 16; armored cruisers, 5; ram, 1; 2-turret monitors, 6; 1-turret monitors, 13; unarmored vessels, 24; gunboats, 21; gunboats (special class), 3; auxiliary cruisers, 7; torpedo boats, 38; torpedo boat destroyers, 16; tugs, 16. Of the auxiliary fleet purchased during the war with Spain, 88 vessels are still (1902) in commission. The chief vessels of the present (1902) navy are the "Chicago" (1882), "Boston" (1882), "Baltimore" (1886), "Olympia" (1888), "Cincinnati" (1888), "Raleigh" (1888), "Columbia" (1890), "Minneapolis" (1891), "Puritan" (1885), "Texas" (1886), "New York" (1888), "Massachusetts" (1890), "Brooklyn" (1890), "Indiana" (1890), "Iowa" (1891), "Katahdin" (1889), "Oregon" (1890), "Kentucky" (1900), "Wisconsin" (1900), "Kearsage" (1900), "Ohio" (1901), "Maine" (1901). The navy reorganization law of Mar. 3, 1899, abolished the rank of commodore and provided for 18 rear-admirals, 70 captains, 112 commanders, 170 lieutenant-commanders, 300 lieutenants, not exceeding 350 junior lieutenants and ensigns. The pay of officers ranges from \$6,000 per year, for a rear-admiral at sea (an admiral receiving \$13,000) to \$800 for an ensign on waiting orders during his first five years of service. The principal navy yards are at Brooklyn, N. Y., Boston, Mass., Norfolk, Va., Portsmouth, N. H., League Island, Pa., Mare Island, Cal., Pensacola, Fla., and Washington, D. C. Stations are maintained at Newport, R. I., New London, Conn., Port Royal, S. C., Key West, Fla., Bremerton, Wash.

Navy, A Career in the.—5090.

Navy Department.—One of the eight executive departments of the national government. It was created in 1798. It is officially designated The Department of the Navy and its head is a civil officer known as the Secretary of the Navy. He is appointed by the President, by and with the consent of the Senate, and receives a salary of \$8,000 per annum. Under the Constitution, the president is commander-in-chief of the army

and navy, but the secretary of each department is his representative and the acts of the secretary are regarded as having the full force and effect of presidential authority. Prior to the establishment of the Department of the Navy, the administration of naval affairs was intrusted to committees, boards, and agents, appointed under various acts of the Continental and Federal congresses. In 1789 all matters relating to the navy were placed under the jurisdiction of the War Department, where they remained until by the act of Apr. 30, 1798, the separate department was organized and the office of Secretary of the Navy was created. It is the duty of the Secretary to execute such orders as he shall receive from the President, relative to the procurement of naval stores and materials, the construction, armament, and equipment of vessels of war, and the direction of their movements. Subsequent acts have provided methods of discharging the ministerial duties of the department. June 8, 1880, an act was passed authorizing the appointment of a judge advocate general. He has special charge of all matter relating to court-martial, and is in a great measure the law officer of the department. By an act of Congress in 1890 the office of assistant secretary was revived, having been abolished at a previous time. He is, under the revised statutes acting secretary of the navy during the absence or incapacity of his superior. The hydrographic office was established in 1862 and added as a bureau to the Department of the Navy.

Navy Yards.—Contain dry docks, floating locks, ship houses, and other conveniences for repairing and sheltering the ships of a government. The U. S. navy yards are at Brooklyn, N. Y., Charlestown, Mass., Norfolk, Va., Portsmouth, N. H., League Island, Pa., Mare Island, Cal., Pensacola, Fla., and Washington, D. C.

Naxos, or Naxia.—(1) In the Ægean Sea, an island of the Cyclades, Greece; noted for its fine wines. (2) The chief town of the island of Naxos.

Nazareth.—In ancient geography a town in Galilee, Palestine, celebrated as the dwelling-place of Jesus during his early life.

Nazarette.—A borough in Northampton Co., Pa.; the seat of a Moravian Academy.

Naze, The.—A cape on the eastern extremity of England, 64 miles northeast of London.

Neal, David Dolloff.—Born at Lowell, Mass., 1837. An American figure-painter.

Neal, John.—(1793-1876.) An American novelist, poet, journalist, and miscellaneous writer.

Nebraska.—One of the Western States of the U. S. Bounded on the north by S. D., east by Iowa and Mo., south by Kan. and Col., west by Col. and Wyo. It was part of the Louisiana Purchase and of Mo. Ter. Neb. Ter. was formed in 1854 and then included portions of the present Col., Wyo., Mont., and the two Dakotas; admitted as a state, with its present boundaries, in 1867. The surface is undulating and the soil fertile; it is devoted almost wholly to agriculture and grazing; is one of the leading states in

the production of corn. Lincoln is the capital and Omaha the chief commercial city; other principal towns are Beatrice, Hastings, Nebraska City, Plattsmouth, Kearney, South Omaha, and Grand Island. It has 90 counties; area, 77,510 sq. miles; pop. (1900), 1,068,539; called the Blackwater State, because of the color imparted to the water of the streams by the rich soil through which they flow.

Nebraska City.—The capital of Otoe Co., Neb. Pop. (1900), 7,380.

Necker, Jacques.—(1732-1804.) French financier, statesman, and author.

Needham.—A town in Norfolk Co., Mass. Pop. (1900), 4,016.

Negaunee.—A city in Michigan, the center of an iron mining district. Pop. (1900), 6,935.

Negley, James Scott.—Born, 1826. At the outbreak of the Civil War he entered the Union army as colonel of the 48th Pa. vols. He was soon promoted to brig.-gen., and in 1862 to maj.-gen.

Negro Plot.—Alleged attempts on the part of certain negroes, incited and assisted by whites, to burn New York City. Mar. 18, 1741, a fire occurred in the chapel and barracks of Fort George. It was at first thought to have been accidental, but eighteen other fires of unaccountable origin within a month, strengthened the allegation of one Mary Burton, that a number of negroes and sailors were implicated in a plot to destroy the town. It was charged that Spaniards were inciting plots among the negroes. Twenty whites and about 160 negro slaves were imprisoned. Four whites and 18 negroes were hanged and 13 others were burned at the stake before the excitement abated.

Negro Troops.—In the early Revolutionary days, and in the last two years of the Civil War, on the Union side, negro troops were employed. In July, 1863, a general provision was made for their enlistment in the Union army, and some 200,000 were in the service. Since the Civil War there have always been negro troops in the regular army. They served in the war with Spain and the 24th infantry (after the death of its colonel) under Maj. Markley bore the brunt of service in the fight at San Juan. Colored soldiers proved to be less subject to the prevailing fevers and the enervating effects of heat than were the white troops.

Neilson, Adelaide.—(1848-1880.) Celebrated English actress.

NELSON.—(1758-1805.)

Horatio Nelson was born in 1758 in Norfolk, England. His father was a country rector. His mother, who was descended from a good family, died when he was nine years old. His life, like that of most leaders, was one of struggle from beginning to end. He struggled against poverty, ill-health, lack of appreciation, domestic trouble, and many other hardships.

Even as a boy he was fearless and ambitious. He was also self-reliant. Seeing that his father was poor, in ill-health, and not able to do much for him, he determined to do something for

Nelson.—*Continued*

himself. At the age of twelve, he entered the navy where, by his promptness, courage, alertness, readiness, and kindness, he made a record which the world will not soon forget. He became lieutenant in 1777, post-captain in 1779, and commodore in 1796. After he helped to win the battle of St. Vincent, he was made rear-admiral.

He won by his promptness, his continual alertness and his unflinching courage. He won the affection of his men by his kind and tender disposition. He ruled by love rather than by fear, and was always opposed to harsh discipline. He did what he could with his might and did it well. He was always interested in the welfare and happiness of others. He was known as a man who always kept his word. When but a midshipman, he remembered, while in the Arctic regions, that he had promised his father the skin of a white bear, if he could shoot one, and placed his life in peril rather than break his word. He never wasted any time. He won his advantages by being a little beforehand.

In 1798 he was sent to the Mediterranean to search for the French fleet. After several months he sighted it at the mouth of the Nile. He had scarcely eaten or slept for days, but now that he had the enemy in view, he ordered dinner before advancing to fight. About six o'clock on August 1, the fierce battle began. In fifteen minutes, two of the French ships were dismantled. At half-past eight three others were taken. Nelson, though he had received a severe wound in the head, was constantly busy and fearlessly brave. The French showed equal courage. From the upper deck of a vessel that was in flames, they continued to fire until the huge vessel exploded and left all in darkness. Among those who perished were Commodore Casabianca and his brave little boy of whom Mrs. Hemans has written:—

“The boy stood on the burning deck
Whence all but him had fled;
The flame that lit the battle's wreck
Shone round him o'er the dead.

“Yet youthful and bright he stood,
As born to rule the storm;
A creature of heroic blood,
A proud, though, child-like form.”

The battle raged until morning and the French suffered a complete loss. For four leagues the shore was covered with wrecks. Besides the vessels that were sunk or burned Nelson took nine sails-of-the-line. Looking at the scene of desolation, he said: “Victory is not a name strong enough for such a scene; it is a conquest.”

He soon received expressions of joy and admiration from many great rulers. England made him a baron, with a pension of £2,000 per year. The East India Company voted him £100,000. Emperor Paul of Russia sent him his portrait set in diamonds, in a gold box. The

sultan of Turkey sent him presents valued at \$23,000. From the sultan's mother he received a gift of diamonds worth \$5,000. From others he had presents of smaller value. All Italy was enthusiastic in rejoicing.

Nelson was second in command at the battle of Copenhagen in 1801. When the battle grew hot he was given the signal to retreat. When told of the signal, he put his glass to his blind eye and said: “I really do not see the signal! Keep mine for closer battle flying! That's the way I answer such signals. Nail mine to the mast!” After five hours of heroic fighting, in which men stood knee-deep among the dead on the decks, an armistice was arranged. Nelson said: “I have been in one hundred and five engagements in the course of my life, but this has been the most terrible of all.” For his part in the battle, he was made a viscount, and, in the following October, took his seat in the House of Lords.

In 1805, Nelson attacked the combined fleets of France and Spain and at the expense of his own life, won the great victory of Trafalgar which destroyed the naval power of France and gave England control of the sea. His signal in the battle was “England expects every man to do his duty.” As he stood on the deck watching and directing, he fell mortally wounded at the moment of victory. His last words were:—“Thank God, I have done my duty.”

Nelson, Samuel.—(1792-1873.) A jurist. He was associate justice of the supreme court of the state of N. Y. (1831-37), chief-justice (1837-45), associate justice of the U. S. Supreme Court (1845-72), and a member of the joint high commission to settle the Alabama Claims in 1871.

Nelson, Thomas.—(1738-1789.) A patriot, signer of the Declaration of Independence in 1776, as delegate to Congress from Va. He served in the Revolutionary War, and became governor of Va. in 1781.

Nelson, William.—(1825-1862.) He entered the navy in 1840, serving therein until the Civil War. He preferred land service and was transferred to the army. In 1861 he superintended the organization and equipment of troops in Ky. He was promoted to maj.-gen. and placed in command of a division in what was then the Army of the Ohio, under Gen. Buell. Nelson was a lion in battle and distinguished himself on the second day at Shiloh. His personal manner was such as to alienate the friendship of other officers, and it was this that led to his tragic death. In the fall of 1862 he was in command at Louisville, Sept. 29, at the Galt House, and in an altercation growing out of their official relations, he was shot and killed by Gen. Jefferson C. Davis. The latter was tried by court-martial but was exonerated and restored to duty. It was considered by the court that the provocation given by the words and manner of Nelson had justified Gen. Davis in taking his life.

Nemesis.—In Greek mythology, a goddess personifying the divine distribution to every man of his precise share of good or adverse fortune.

- Nepos, Cornelius.**—Lived in the 1st century B.C.; born at Verona, Italy. A Roman historian.
- Neptune.**—See GREEK AND ROMAN MYTHOLOGY, 1616.
- Neptune.**—See PLANETS, 2990.
- Nereids.**—In Greek mythology, sea nymphs, daughters of Nereus and Doris.
- Nero.**—(37 A.D.—68 A.D.) Roman emperor 54–68. In the latter years of his reign he became a cruel despot; took his own life, when overthrown by a revolt under Galba.
- Nessler, Victor.**—(1841–1890.) German composer and conductor.
- Nestor.**—In Greek legend, a king of Pylus, famous as the oldest councilor of the Greeks before Troy.
- Net.**—The clear amount; what remains after deducting charges and expenses.
- Netherlands.**—A kingdom of western Europe, often called Holland, after North Holland and South Holland, two of the 11 provinces into which the kingdom is divided. It is bounded on the north and west by the North Sea, east by Prussia, and south by Belgium. The government is a hereditary constitutional monarchy, administered by a king and a states-general, composed of an upper and lower chamber. The prevailing religions are Dutch Reformed and Roman Catholic. It has an area of only 12,648 sq. miles, upon which live a population of 5,004,204. The colonial population of the Netherlands, however, approximates 33,000,000, living on possessions aggregating 833,000 sq. miles.
- Neuchâtel.**—A canton of Switzerland, noted for its manufacture of watches and lace. Pop., over 100,000.
- Neutral Ground.**—In the Revolutionary War, that part of Westchester Co., N. Y., which lay between the British lines on the south and the American lines on the north.
- Neutrality, Proclamation of.**—Neutrality, in international law, is the attitude and condition of a nation or state which does not take part directly or indirectly in a war between other nations or states, but maintains relations of friendship with both or all the contending parties. In ancient times, war between any two nations was likely to involve another, either through sympathy or by its being drawn unwillingly into the controversy on the accusation of favoring one or the other of the belligerents. Modern civilization has made it possible for a peacefully inclined nation to avoid entanglements in quarrels not of its own making. The position which a state intends to take in case of war between its neighbors should be clearly defined. It is customary, therefore, on the breaking out of hostilities, for every nation not participating therein to declare its position with reference to the belligerents. This is usually done by a proclamation by the chief ruler of a nation, proclaiming its neutrality and calling upon its citizens to refrain from any acts of hostility or special favor toward either of the parties to the strife. It is also customary for every nation to put on the statute books general laws regulating the acts of its citizens with reference to foreign wars.
- Neva.**—A river of northern Russia rising in Lake Ladoga flowing into the Gulf of Finland. Length, 40 miles.
- Nevada.**—One of the Western States of the U. S. of America. Bounded on the north by Ore. and Id., east by Utah and Ariz., south and west by Cal. Part of the territory was acquired by the war with Mex., the first permanent settlements were made from 1848 to 1850; Nev. Ter. was organized in 1861 and was admitted as a state in 1864. Silver was discovered in 1859, and the mining of that metal was the chief factor in the development of the state. The famous Comstock Lode was the richest yet found in the country, yielding, before it was exhausted, more than a hundred millions of dollars. Gold and other metals are also found in considerable quantities. The state is not suited to agriculture, though there are some fertile valleys which are chiefly devoted to stock-raising and wool-growing. The capital is Carson City; there are no other towns of importance; the entire population of the state is less than that of the small city of Utica, N. Y. It has 14 counties; area, 110,700 sq. miles; pop. (1900), 42,335; called the Silver State.
- Nevada City.**—The capital of Nevada Co., Cal. It exports gold. Pop. (1900), 4,888.
- Nevada Fall.**—A cataract in the Merced River, Yosemite Valley, Cal. Height, about 600 feet.
- New Albany.**—The capital of Floyd Co., Ind. It has the largest glass works in the U. S. Pop. (1900), 20,628.
- New Albion.**—The name given by Drake to that part of the Pacific coast now included in northern Cal., Ore., and the region northward.
- New Almaden.**—A village in Cal., noted for its quick-silver mines.
- New Amsterdam.**—The name of the Dutch colony founded in 1814 on the site of present city of New York.
- Newark.**—(1) The capital of Essex Co., N. J., on the Passaic River. It is the largest city in the state, an important railway and trade center and has numerous manufactures. Pop. (1900), 246,070. (2) The capital of Licking Co., Ohio. Pop. (1900), 18,157.
- New Beacon.**—The highest point of the Highlands of the Hudson, in Dutchess Co., N. Y. Height, 1,685 feet.
- New Bedford.**—One of the capitals of Bristol Co., Mass., it has manufactures of cotton goods. Pop. (1900), 62,442.
- Newbern, or New Berne (N.C.), Capture of.**—After obtaining possession of Roanoke Island (which see), in Feb., 1862, Gen. Burnside proceeded against Newbern, an important strategic point on the Neuse River, which had been strongly fortified by the Confederates. March 14, Burnside landed a heavy force below the city, advanced and carried the works by assault, capturing 46 heavy guns, three field batteries, a large quantity of stores, and 2,500 prisoners. The Federal loss in killed and wounded was 550;

- that of the Confederates who fought behind intrenchments, was less than 100.
- New Berne.**—The capital of Craven Co., N. C. It has an extensive coast trade in naval stores. Pop. (1900), 9,090.
- Newberry, John Strong.**—(1822-1892.) A noted American geologist.
- New Brighton.**—(1) A village on the northern side of Staten Island. (2) A borough in Beaver Co., Pa. Pop. (1900), 6,820.
- New Britain.**—A city in Hartford Co., Conn., engaged largely in the manufacture of builders' hardware. Pop. (1900), 25,998.
- New Brunswick.**—A maritime province of the Dominion of Canada, lying east of the state of Maine, and south and west of the river and gulf of St. Lawrence. Nova Scotia lies to the east of it, being connected with it by a narrow isthmus. Its chief industries are fisheries and lumbering. Area, 28,100 sq. miles; pop., about 320,000.
- New Brunswick.**—The capital of Middlesex Co., N. J.; the seat of Rutgers College, and of a Dutch Reformed theological seminary. It has manufacturing interests. Pop. (1900), 20,006.
- Newburg.**—The capital of Orange Co., N. Y. It has manufactures and river trade; shipping port for coal. Pop. (1900), 24,943.
- Newburg Addresses.**—Two anonymous letters to the American army, written in 1783 from Newburg, N. Y., by John Armstrong, in which he set forth the grievances of the soldiers.
- Newburyport.**—One of the capitals of Essex Co., Mass., on the Merrimac River. Ship-building and manufacturing interests. Pop. (1900), 14,478.
- Newcastle.**—The capital of Lawrence Co., Pa.; manufactures and mines. Pop. (1900), 28,339.
- Newcastle.**—A seaport and the chief town of Northumberlandshire, England; situated on the Tyne; the largest coal market in the world. Pop., about 200,000.
- Newell, Robert H.**—(1836-1901.) A well-known journalist and writer. Known best by the "Orpheus C. Kerr Papers," published during the Civil War.
- New England.**—A collective name for the northeastern section of the U. S., comprising the states of Me., N. H., Vt., Mass., Conn., and R. I.
- New England, Council for.**—Incorporated Nov. 3, 1620, with headquarters at Plymouth, England. The patent granted the company all the land from the Atlantic to the Pacific Ocean lying between lat. 40° and 48° north. The land was afterward divided among 20 noblemen. From this company William Bradford obtained the permit which resulted in the settlement of Plymouth Colony in Massachusetts.
- New England Confederation.**—The union formed by the colonies of Massachusetts Bay, Plymouth, Connecticut, and New Haven, in 1643, for defense against the Dutch and Indians. Discontinued in 1684.
- New England Emigrant Company.**—An association formed in Boston 1855 to assist anti-slavery men in emigrating to Kansas. The purpose of the company was to stock the state with citizens opposed to the extension of slavery, and thus to make Kansas a free state. This purpose was substantially accomplished.
- New England Primer.**—A small book of instruction, printed at Boston in 1691.
- New England Shilling.**—A rude coin minted in Boston from the year 1652, bearing the denomination mark "XII," signifying 12d., and valued at about 18¼ cents.
- Newfoundland.**—An island belonging to Great Britain, situated east of the Dominion of Canada. Capital, St. John's. Area, 42,200; pop., about 200,000.
- New France.**—The name was given to that part of North America which was settled or claimed by France. The first permanent settlement was Quebec, which was founded by Champlain in 1608. The territory rapidly extended so that in 1650 it included the basin of the St. Lawrence and neighboring regions. By 1750 it included also the basin of the Great Lakes and of the Mississippi River. Meanwhile there had been many wars, with conquests and reconquests. In 1759 Canada was reconquered by the English, and the Treaty of Paris, 1763, ceded all the territory east of the Mississippi to England and all west of it to Spain.
- New Granada.**—An ancient name of the South American country now known as Colombia.
- New Guinea, or Papua.**—The largest island in the world; it lies north of Australia, from which it is separated by Torres Strait. Area, 313,000; pop., about 800,000.
- New Hampshire.**—One of the New England States and one of the thirteen original states of the American Union. Bounded on the north and west by the province of Quebec, Canada; east by Maine, and the Atlantic; south by Massachusetts and Vermont. Capital, Concord; largest town, Manchester. It is one of the leading manufacturing states, and noted especially for its cotton and woolen productions. Pop. (1900), 411,588.
- New Haven.**—(1) A Puritan colony in New England, established in 1638, and united with Conn. in 1662. (2) The capital of New Haven Co., Conn., on New Haven Harbor, near Long Island Sound: It is the largest city in the state, has manufactures of carriages, Winchester arms, etc., and is the seat of Yale University. Pop. (1900), 108,027.
- New Hope Church (Ga.), Battle of.**—Also called Pumpkin Vine Creek. A series of skirmishes or battles, one of which was severe, between Generals Sherman and Johnston, May 25-28, 1864. The loss on each side was about 2,500 men. Neither party secured important advantage.
- New Ireland.**—In the Pacific Ocean, an island of the Bismarck Archipelago. A German possession since 1884. Length, about 300 miles.
- New Jersey.**—One of the thirteen original states and one of the North Atlantic States of the American Union. Bounded on the east by New York and the Atlantic, north by New York, south by Delaware Bay, and west by Pennsylvania and Delaware. First settled by the

- Dutch, at Bergen, about 1617. One of the leading manufacturing states of the Union, especially in zinc, glass, and silk. Capital, Trenton; principal cities, Newark and Jersey City. Pop. (1900), 1,883,669.
- New Jerseymen Foreigners.**—A derisive name given to the people of New Jersey in allusion to the fact that the legislature, by a special act, permitted Joseph Bonaparte to acquire real estate and live in princely magnificence in New Jersey after he had been refused by Pennsylvania.
- New Jersey Plan.**—This was the constitution proposed by William Paterson, of N. J., at the convention held at Philadelphia, in 1787, to amend the articles of confederation. Among various items of interest the plan provided for a single house of Congress with power to choose a president, who should have power to coerce refractory states and individuals. The plan was rejected in favor of the Va. plan, which, however, was extensively modified before its adoption.
- New Lebanon.**—A town of Columbia Co., N. Y. Here is situated the village of Mount Lebanon, containing the Shaker community, and the village of Lebanon Springs, noted for hot springs. Pop. (1900), 1,556.
- New London.**—One of the capitals of New London Co., Conn.; fishing industries. Pop. (1900), 17,548.
- New London (Conn.), Capture of.**—The town of New London was imperfectly defended by the unfinished Fort Trumbull, which was manned by about 30 soldiers of the state militia. On Sept. 6, 1781, Benedict Arnold, the traitor, arrived in the harbor before the town with a large British force, and overpowered the defense by his superior numbers.
- New Madrid (Mo.), Battle of.**—New Madrid, on the Mississippi River nearly 50 miles below Cairo, and opposite Island No. 10, was a Confederate stronghold. It was captured by General Pope, March 14, 1862, the garrison having withdrawn to Island No. 10 the preceding night, which was dark and stormy.
- Newman, John Henry.**—(1801-1890.) An English Roman Catholic prelate and author.
- New Mexico.**—A territory in the southwestern part of the U. S. of America, lying between Texas on the east and Arizona on the west. It was settled by the Spanish missionaries in the 16th century, conquered by the Americans in 1846, ceded by Mexico to the U. S. in 1848, organized as a territory in 1850, and enlarged by the "Gadsden Purchase" in 1853. The inhabitants are largely of Mexican descent. The country is mountainous and abounds in mineral wealth. The principal occupations are mining and rearing live stock. The capital is Santa Fé. Area, 122,580 sq. miles; pop. (1900), 195,310.
- New Netherlands.**—The second in order of settlement of the thirteen colonies; the region lying between the Delaware and Connecticut rivers.
- New Orleans.**—The largest city of La., the chief seaport of the Mississippi Valley, and the largest cotton market in the U. S. It has a large export trade. Pop. (1900), 287,104. It boasts the largest customhouse in this or any other land. It was begun in 1848 and over thirty years elapsed before it was ready for use. It is built of Quincy granite and the interior is finished in finest marble. It has 111 rooms. The height from the pavement to the top of the cornice is eighty feet, and to the top of the light on the dome, one hundred and eighty-seven feet. The dome itself is forty-nine feet square and sixty-one feet high. The estimated total cost of building, \$4,900,000.
- New Orleans (La.), Battle of.**—This was fought near New Orleans, Jan. 8, 1815, between British troops under Sir Edward Pakenham, and American troops under General Jackson. The British numbered 10,000, most of them being veterans recently under Lord Wellington; the Americans numbered 5,800 in all, of which only 2,200 were at the front, and of this number not more than 800 were veterans. In the battle, in which the Americans fought from behind intrenchments, the British lost 700 killed, including Sir Edward Pakenham, 1,400 wounded, and 500 prisoners. The Americans lost 8 killed and 13 wounded. The battle is remarkable for the disparity in the number lost.
- New Orleans (La.), Capture of.**—The city of New Orleans, lying on the east bank of the Mississippi River, 90 miles from its mouth, controls all the foreign, and much of the domestic, commerce of the vast region of the Mississippi Valley. The importance of the city to the Confederates, and the desirability of its capture by the U. S. forces were apparent. Its real defenses were Forts Jackson and St. Philip, 60 miles below the city and advantageously located on either bank of the river near the great bend where the stream is narrow and the current swift. The forts were reinforced by a strong fleet of gunboats and the river below was obstructed by a heavy chain, or boom, stretched from bank to bank. At the suggestion of Commodore Porter, General Butler with a force of 15,000 men was sent in the spring of 1862, to cooperate with Commodore Farragut in an attempt to capture New Orleans. With a strong fleet Farragut sailed up the river as far as the obstructions, and for six days shelled the forts without material success. He then decided to run by the forts. The fleet was separated into three divisions, of which Farragut led the second. Amid a storm of shot, close to the mouths of the guns, for the river was narrow at that place, against a swift current, avoiding blazing rafts that had been turned adrift from above, the fleet destroyed the obstructions, ran by the forts, then fiercely attacked the formidable fleet of Confederate gunboats that was awaiting the onset, and quickly destroyed it. The victory was complete, and on May 1, 1862, New Orleans was occupied by the Federal troops and was held to the close of the war. The total Federal loss, in killed and wounded, was 184; the Confederate loss was given at 40.
- Newport.**—(1) The capital of Campbell Co., Ky. Manufacturing interests. Pop. (1900), 28,301.

(2) One of the capitals of the state of R. I., situated on the island of R. I. in Narragansett Bay; a fashionable summer resort. Pop. (1900), 22,034.

Newport News.—A point of land on the north side of Hampton Roads, Va., a few miles from Norfolk.

New Rochelle.—A city in Westchester Co., N. Y., situated on Long Island Sound a few miles from New York City. Pop. (1900), 14,720.

New South Wales.—A British colony in Australia; capital, Sydney. Stock raising and mining are the chief industries. Area, 310,700 sq. miles; pop., over 1,000,000.

Newspaper.—The first newspaper advertisement was in 1652.

NEWSPAPERS, FIRST.—

In ancient Rome an official gazette, called "Acta Diurna," was issued under the management and authority of the government, and was posted up daily in some prominent place in the city.

In Venice a paper of public intelligence, called "Gazette," was published in 1620.

In England the first weekly newspaper was published by Nathaniel Butler in 1622.

In England the first daily newspaper in 1709.

In France the first weekly newspaper was published in 1631.

In France the first daily, 1777.

In America, at Boston, a newspaper was published in 1690.

In Ireland the first newspaper, called "Pue's Occurrence," appeared in 1700.

In Ireland, the oldest Dublin newspaper, "The Freeman's Journal," in 1755.

In Germany, the first newspaper was published in 1715.

In Holland, the first newspaper was published in 1732.

In Turkey, the first newspaper was published in 1795.

In Australia, the first newspaper was published in 1803.

The first English newspaper was the "English Mercury," begun in the reign of Queen Elizabeth, and was issued in the shape of a pamphlet. The "Gazette" of Venice was the original model of the modern newspaper.

The oldest newspaper in the world is said to be the British "Press," which was first issued in 1662. Three years later the "London Gazette" appeared, being published at Oxford on account of the plague in London.

New Sweden.—A Swedish colony in Del. Founded in 1638, conquered by the Dutch in 1655.

Newton.—A city in Middlesex Co., Mass. Pop. (1900), 33,587.

Newton, John.—(1823-1895.) A soldier and engineer of note. He was educated at West Point and entered the U. S. army in 1842. Early in the Civil War he was made a brig.-gen., and in 1863 a maj.-gen.

Newton, Sir Isaac.—(1642-1727.) Famous English natural philosopher and mathematician. Discoverer of the law of gravitation.

New York (Greater New York).—The name of the metropolis of the U. S., situated in the southeastern part of New York state. On Jan. 1, 1898, the territory of New York City proper was enlarged so as to include many neighboring cities and towns: Brooklyn, Staten Island, etc. The city as thus enlarged is next to London, the largest in the world. It is also the chief commercial center and most important port in the Western Hemisphere. Pop. (1902), estimated, 3,582,930. Its net public debt in 1902 was \$364,270,868, and the assessed valuation of all taxable property was \$3,787,970,873. The pop. of Greater New York and environs (Yonkers, Newark, Jersey City, etc.), over 4,500,000. Area, 308 sq. miles.

"**New York,**" **The.**—The flagship of Admiral Sampson during the Spanish-American War. (See SAMPSON, WILLIAM THOMAS, 503.)

New York Bay.—The bay at the mouth of the Hudson, on which New York City is situated.

New York Public Library.—A library formed by consolidating the Astor, Lenox, and Tilden libraries in May, 1895.

New Zealand.—In the Pacific Ocean, southeast of Australia, a group of islands belonging to Great Britain. The inhabitants are engaged principally in agriculture and gold mining. Pop. (1893), about 672,265.

New Zealand Fairy Tales.—1238.

Ney, Michel, Duc d'Elchingen, Prince de la Moskowa.—(1769-1815.) A celebrated French marshal.

Nez Percé Indians.—A warlike tribe of Indians of the Shahaptian stock, that lived chiefly along the shores of the Columbia and Snake rivers when discovered by Lewis and Clark in 1804. They are now on the reservation in Id., and number about 1,500.

Niagara.—A city in Niagara Co., N. Y. It contains the villages of Niagara Falls and Suspension Bridge. Pop. (1900), 19,457.

"**Niagara,**" **The.**—The vessel to which Com. Oliver Hazard Perry transferred his flag, after the "Lawrence" had been disabled, during the battle with the British fleet on Lake Erie, Sept. 10, 1813. (See PERRY, OLIVER HAZARD, 453.)

Niagara Falls.—Situated in the Niagara River; the largest cataract in the world. It is divided into the American Fall, 164 feet high, and the Horse-shoe or Canadian Fall, 150 feet high.

Niagara River.—A river that flows from Lake Erie northward into Lake Ontario. It separates New York from the province of Ontario, Canada. Length, 32 miles.

Nibelungenlied.—1761.

Kriemhilda's Dream, 1762.

Sigfried's Career Begins, 1763.

How Sigfried Came to Worms, 1763.

How Günther Won Brunhilda, 1766.

A Consummation, 1767.

A Woman's War, 1768.

Treachery Triumphant, 1770.

Kriemhilda's Sorrow, 1772.

Kriemhilda Remarries and Plans Revenge, 1772.

Kriemhilda's Revenge, 1774.

- Niblo's Garden.**—A famous old Broadway theater in New York City; opened in 1828; in 1829 a concert saloon. As Niblo's Garden and Theater it was opened in 1839, burned in 1846 and in 1872, and reopened in 1872. Taken down in 1895.
- Nicander, Karl August.**—(1799-1839.) A noted Swedish poet.
- Nicaragua.**—One of the five Central American republics. The language is Spanish and the state religion is Roman Catholic. The chief products are coffee, hides, cabinet woods, rubber, fruits, and gold. Area, 40,000 sq. miles. Pop., estimated (1898), about 420,000.
- Nicaragua Canal.**—A projected ship canal across the isthmus connecting North America and South America. The purpose of the canal is to connect the Atlantic and Pacific oceans so as to avoid the long sail around Cape Horn. The specific advantage of the Nicaragua route is the possibility of utilizing San Juan River and Lake Nicaragua, thereby materially lessening the labor of excavating. The desirability of such a canal has been recognized ever since the time of the Spanish conquests, and the feasibility of the Nicaragua route has been maintained from the middle of the 16th century. Many surveys of the route have been made, the most complete being those of the U. S. government in 1872-73, and in 1885. Congress in 1899 authorized President McKinley to secure the necessary concessions or the confirmation of concessions previously granted, for the prosecution of the work. All preliminary work has been satisfactorily accomplished. But other proposed routes, particularly that by way of Panama, have their ardent champions, and the final choice of route is, at this present writing, still pending.
- Nice.**—In France, a seaport and the capital of the department of Alpes-Maritimes. A famous health resort; chief industries, the manufacture of perfumes and oils. Pop. (1891), about 89,000.
- Nicholas I.**—(1796-1855.) Czar of Russia.
- Nicholas I., "The Great."**—Pope of Rome (858-867).
- Nicholas II.**—Pope of Rome (1058-1061).
- Nicholas III.**—Of the house of Orsini. Pope of Rome (1277-1280).
- Nicholas IV.**—Pope of Rome (1288-1292).
- Nicholas V.**—Pope of Rome (1446-1455).
- Nicholson, James William Augustus.**—(1821-1887.) A noted American admiral who served with distinction during the Civil War.
- Nickel.**—A metallic element (Ni) used extensively in plating, where it is applied in the form of a double sulphate of nickel and ammonia. United in varying proportions with copper and zinc it forms "German Silver."
- Nicolai, Otto.**—(1810-1849.) A noted German composer and conductor.
- Nicolay, John George.**—Born in Germany, 1832. Author; private secretary of Abraham Lincoln (1860-65). Collaborated with John Hay in writing the "Life of Abraham Lincoln" and in editing the "Complete Works of Abraham Lincoln."
- Niel, Adolphe.**—(1802-1869.) A famous French marshal, especially distinguished in the Crimean War.
- Nieman.**—A river of West Russia, and the province of East Prussia. Length about 500 miles.
- Niger.**—A great river of Africa, flowing into the Gulf of Guinea. Length about 2,600.
- Nightingale, The.**—2562.
- Nightshade.**—The common name of the genus of plants known to botanists under the name of *Solanum*. The flowers strongly resemble those of the potato. It also passes under the names of bittersweet and Dulcamara, because the taste is at first sweet and then bitter. It has medicinal uses especially as an antiscorbutic remedy. There is another plant, the Deadly Nightshade, the *Atropa Belladonna*, with which this is often confounded. The latter is highly poisonous and yields atropin.
- Nihilists.**—The followers of nihilism. Nihilism is an organized secret effort of a party of so-called reformers to overturn or revolutionize the established order of things, in Russia particularly, both social and political.
- Nijni-Novgorod.**—In central Russia, the capital of the government of Nijni-Novgorod. Noted for its great annual fairs; also an important trade center. Pop. (1894), about 70,000.
- Nike.**—In Greek mythology the goddess of victory; called by the Romans *Victoria*.
- Nike Apteros or Wingless Victory, Temple of.**—A famous Ionic temple of Athens.
- Nile.**—The longest river in Africa and one of the longest rivers in the world. It flows in a northerly direction for 3,400 miles and empties into the Mediterranean Sea near Suez. It is divided into two branches, the White Nile and the Blue Nile. The main source of the river is The Victoria Nyanza, a very large lake lying under the equator. The Blue Nile rises in the highlands of Abyssinia and the two join at Khartoum. The fertility of Egypt is confined to a narrow strip along the banks of the Nile, which is overflowed by the river during the rainy season, and a deposit of alluvial matter renders the land productive. The crops are watered by an antiquated system of irrigation. A peculiar formation is the Delta of the Nile,—a large triangular tract, so-named from its resemblance to the Greek letter delta. The height to which the river rises is a matter of so much concern to the people that they have placed graduated stone pillars along its course to measure the rise. These pillars are called Nilometers.
- Niles, Hezekiah.**—(1777-1839.) A journalist, founder of the weekly journal "Niles' Register."
- Nilsson, Christine.**—Born, 1843. A famous Swedish soprano singer, who first appeared before the public in 1860, and who retired from the stage in 1888.
- Nîmes.**—In France, the capital of the department of Gard; noted for its manufactures of silks, and also as a trade center. It has much historical interest, having been conquered by the Romans in 121 B.C.

NINETEENTH CENTURY, ECONOMIC PROGRESS OF THE

DIFFERENCE IN ITS DEVELOPMENT FROM ALL PRECEDING CENTURIES—CHANGES IN POPULATION IN EUROPE AND IN THE UNITED STATES—THE CREATION OF RAILWAYS AND THE GROWTH OF STEAM MANUFACTURING POWER—HOW LOW FREIGHT RATES UNIFIED THE WORLD MARKET AND PROMOTED UNIVERSAL COMPETITION—DEVELOPMENT OF CREDIT AND BANKING POWER—VOLUME OF THE WORLD'S COMMERCE—PROGRESS OF THE UNDEVELOPED COUNTRIES.

THE nineteenth century witnessed a more striking growth in wealth, and in the material comforts of civilization, than had any preceding century in the history of the world. This statement can be made without qualification, because of the new power brought to the aid of men by machine production. The application of steam power, and electricity, to manufacturing, and transportation, has revolutionized the organization of industry, brought together distant parts of the world, and so increased the producing power of the individual arm, that a comparatively small part of the members of the community are now able to produce its food supply, clothing, and shelter, and a larger proportion than ever before are released from these employments for the higher ones of luxury, literature, art, and ministry to the finest tastes. The changes in methods of business, in wealth, and in general conditions, which have been thus brought about, are revealed chiefly through the creation of mills, and factories, through the increase in their output and the increased equipment for carrying this output, by rail, and steamship, to all parts of the world, and through the great volume of commerce, banking credits, and saved capital, among every civilized people. These changes in methods of production and exchange have caused not merely changes in the volume of things produced and in the rapidity of their exchange, but have tended to wipe out the distinctions between markets, and to reduce competition in the great staple articles of agriculture and manufactures to competition in a single world market, where prices and conditions affecting supply and demand are flashed around the world in an instant by the telegraph, the telephone, and the ocean cable.

The world is now many times richer in the aggregate than it was at the beginning of the nineteenth century, and many times richer in the average wealth of the individual. Population has increased with rapid strides, and to an extent which would not have been possible under the old conditions of food production and transportation. The world is no longer shut off in isolated communities, which are compelled to raise their own food and to make their own clothing, and which suffer famine and starvation if their local supplies fail. Each civilized people, in time of peace, can now count upon the resources of all other peoples to supply its needs, with no greater disturbance in case of crop failure or emergency than the fluctuations of securities on the stock market or the transfer of gold and credits between great banking houses. Populations have sprung up in Great Britain, Belgium, and the large cities of other countries, which draw their food supplies from other lands, or over seas. They never expect, under the most favorable conditions, to obtain these supplies entirely at home, because they have found that under modern conditions they can more profitably exchange for the food and raw materials of the less advanced countries, the finished products of their mills and workshops. All this became possible upon a large scale only within the latter half of the nineteenth century. The population of the European countries more than doubled within the century, and has shifted the balance of political power. The growth of Europe in population is shown in the following table:—

EUROPEAN POPULATIONS IN THE NINETEENTH CENTURY

	BEGINNING	END	INCREASE	PER CENT. INCREASE
United Kingdom.	15,668,993	40,500,000	24,831,007	159
France	27,349,003	39,000,000	12,650,997	46
Germany	22,000,000	53,900,000	31,900,000	145
Russia in Europe.	40,170,000	110,000,000	69,830,000	174
Austria-Hungary.. . . .	18,000,000	43,700,000	25,700,000	143
Italy.	17,380,000	34,000,000	16,620,000	95
Spain.. . . .	10,351,000	19,000,000	8,649,000	83 5
Portugal.. . . .	3,630,000	5,500,000	1,870,000	52
Belgium.. . . .	3,780,000	6,675,000	2,895,000	76
Holland	2,760,000	5,100,000	2,340,000	84
Sweden.. . . .	2,159,000	5,000,000	2,841,000	131
Norway.	884,000	2,150,000	1,266,000	143
Denmark	926,000	2,350,000	1,424,000	154
Switzerland	2,392,740	3,150,000	757,260	32
	163,450,736	370,025,000	206,574,264	126

These figures illustrate the comparatively small populations which fought out the Napoleonic wars, and the differences in political influence which have come with changes in the numbers of the people. France in 1800 was the chief power in Europe. Austria and Great Britain combined surpassed her but little in population. How recent changes in population have gone hand in hand with the shifting of the axis of political power, is thus described by the eminent English statistician, Mr. Robert Giffen : * —

* These facts correspond very closely with the transfer of military preponderance on the continent from France to Germany, and with the increasing prominence of Russia, which would probably be much more felt but for the simultaneous growth of Germany. They also explain why it is that the United Kingdom, with an economic and social development resembling that of France, in many respects, has fallen less behind in the political race; why its relative position among European powers, though not what it was fifty years ago, is less weakened than that of France has been. Fifty years ago it was the leader among powers which were occupied in restraining France, singly a greater power than any. Now it is about equal in numbers to France, although its whole position is changed by the fact that no power, not even Germany, preponderates to the same extent as France once did."

How the means have been found for maintaining these great populations in comfort — and even in luxury, when contrasted with the meager conditions of a century or two ago — is the story of machine production through the use of steam, and of the myriad of inventions that have followed in its wake. The increase in the volume of commerce has been the striking visible proof of the increased producing and consuming power of the world. The entire population of the earth in 1800 was estimated, by careful students, at 640,000,000 souls. The combined foreign commerce of all countries was estimated at \$1,479,000,000, or \$2.31 per capita. The population increased about two-thirds up to 1860, and commerce had risen only to \$4,049,000,000, or less than three times the amount at the beginning of the century. The second half of the

* "Essays in Finance," Second Series, p. 286.

century witnessed an increase of less than half in the population of the world but a nearly fivefold increase in the volume of commerce, and an increase in its amount per capita from \$3.76 to \$13.27. These comparisons are forcibly set forth by the following table:—

YEAR	POPULATION	AGGREGATE COMMERCE	COMMERCE PERCAPITA
1800.....	640,000,000	\$1,479,000,000	\$2.31
1850.....	1,075,000,000	4,049,000,000	3.76
1870.....	1,310,000,000	10,663,000,000	8.14
1898.....	1,500,000,000	19,915,000,000	13.27

These figures show that the most rapid upward movement in the volume of commerce occurred after 1860, and even after 1870. The closing generation of the century witnessed a production of machine-made goods, and an accumulation of capital, far exceeding those of any earlier period. The earlier years of the century were largely employed in perfecting the new inventions and in supplying the manufacturing nations with the full equipment for meeting the new demands. The most important elements of this new equipment were the practical application of steam power to manufacturing, a network of railways, and a fleet of ocean steamers, sufficient to link together the world's chief markets; a sufficient fund of saved capital for creating these new engines of production and exchange without trenching upon the ordinary resources of civilized communities; an organization of credit that would give this saved capital a transferable and loanable form; and, finally, a freedom for the transfer of goods and capital between nations which would permit both to compete freely in the world's markets. The development of these various factors of modern economic life has proceeded gradually along similar, but not exactly parallel, lines. The capital necessary for the new machinery was scarce in the early years of the century, and when railroad building began on a large scale, a severe strain was put upon the resources of even the richest nations. But every successful enterprise that involved a larger net product from a given number of hands, increased the capacity for saving and the capital available for creating new instruments of production. Undue absorption of capital in a given direction caused temporary periods of overproduction, glutted markets, and stagnant trade; but every new crisis of this sort was followed by a new outburst of industrial activity and by a more rapid production of wealth than any which had gone before. The character of these great forces operating upon the development of the nineteenth century, and some of the results that they have produced, it is the purpose of this chapter to set forth.

One of the most efficient weapons of the new era was the power of steam. Steam first became a serious factor in production near the middle of the century, but in 1850 it still amounted to less than four million effective horse power. This capacity was multiplied more than fourteen times within the half century that followed. Europe increased her equipment from 2,240,000 effective horse power, in 1850, to 36,645,000, in 1895; the United States, from 1,680,000 to 16,940,000; and the English colonies from 70,000 to 1,995,000, with the result of swelling the total for the world from 3,990,000 horse power, in 1850, to 55,580,000 horse power, in 1895. In France, where these figures are carefully kept, the returns for 1896 showed the existence of 67,347 stationary machines engaged in industry alone, with the combined horse power of 1,262,688. The increase since 1850 was more than one thousand per cent., and even within five years

was more than twenty-five per cent. The increased power attained by the human race through this new engine of production was set forth for the United States as long ago as 1886, in the following extract from a report by Hon. Carroll D. Wright, United States Commissioner of Labor:—

“The mechanical industries of the United States are carried on by steam, and water, power representing, in round numbers, 3,500,000 horse power, each horse power equaling the muscular labor of six men; that is to say, if men were employed to furnish the power to carry on the industries of this country, it would require 21,000,000 men, and 21,000,000 men represent a population, according to the ratio of the census of 1880, of 105,000,000. The industries are now carried on by 4,000,000 persons, in round numbers, representing a population of 20,000,000 only. There are in the United States 28,600 locomotives. To do the work of these locomotives upon the existing common roads of the country, and the equivalent of that which has been done upon the railroads the past year, would require, in round numbers, 54,000,000 horses and 13,500,000 men. The work is now done, so far as men are concerned, by 250,000, representing a population of 1,250,000, while the population required for the number of men necessary to do the work with horses would be 67,500,000. To do the work, then, now accomplished by power, and power machinery, in our mechanical industries and upon our railroads, would require men representing a population of 172,500,000, in addition to the present population of the country of 55,000,000, or a total population, with hand processes and with horse power, of 227,500,000, which population would be obliged to subsist on present means. In an economic view, the cost to the country would be enormous. The present cost of operating the railroads of the country with steam power is, in round numbers, \$502,600,000 per annum; but to carry on the same amount of work with men and horses would cost the country \$11,308,500,000.”

The application of the power of steam to transportation has been a necessary complement of its application to production. Manufacturing upon a large scale, for a wide market, would have been comparatively useless, especially for bulky articles, if the means had not been created for carrying manufactured products at low rates to the uttermost parts of the earth. The influence of railway construction upon the conditions of industry has gone far beyond the mere cheapening of transportation and the increase in productive power. It has worked a change in social relations among producing nations because it has broken down the barriers between markets. It is this fact—bringing the producers of widely separated points into competition with each other in common markets—that has had much to do with increasing the severity of this competition, and with causing the creation of trust combinations for dividing and controlling markets. There was a time when the individual manufacturer had a practical monopoly of the market within a certain distance from his mill, or at least had no other competitors than those of the same locality. The village cobbler, the local tailor, and weaver, in an English country town, ran but small risk of competition from London or from the other great towns, because of the time required to reach them and the cost and delay of shipping goods.

The change which has brought markets together has come about by degrees. The charges for railway carriage have been reduced, from decade to decade, with the improvement in railway construction, through economy in the use of fuel, derived from improvement in machinery, and through the gradual cheapening of most of the materials of construction. A recent article in the London “Contemporary Review” estimated the combined carrying power of ships and railroads at 26,440,000 tons, in 1860, and 83,340,000 tons, in 1892. It was calculated that in the year 1850 the cost of land carriage for goods in Europe was about \$10 a ton, for one hundred kilometers (62 miles), amounting to about sixteen cents a mile. The reduction in these charges in recent years was set forth in a forcible manner by Professor Henry T. Newcomb, in a report to the Department of Agriculture in 1898, in which he showed that the average revenue from freight, per ton, per mile on the railways of the United States, fell from 1.613 cents in 1873 to 0.806 cent in 1896,—a fall of one-half the original rate within less than a generation.

These reductions in the cost of transportation have resulted in a greatly increased volume of commerce. The freight traffic on the railways of the world is estimated to have trebled between 1870 and 1892, rising from 562,000,000 tons in the former year to 1,746,000,000 tons in the latter year. Europe absorbed 902,000,000 tons of the later traffic, the United States 749,000,000 tons, and other countries 95,000,000 tons. The estimated railway equipment of the world in 1896 was about 445,000 miles (715,000 kilometers), representing a cost of nearly thirty-three thousand millions of dollars (170,000,000,000 francs.)* How recent has been this railway development is indicated by the fact that more than half of the present railway mileage of the United States has been constructed since 1880. The mileage of 1870 was only 49,160 miles, which rose in 1880 to 87,724 miles. The next ten years brought up the construction to 163,597 miles, since when construction has been less rapid, because the great centers of trade and production were connected and equipped with railway construction. The mileage of 1900 was about 190,000. In France, the length of railways in operation, exclusive of private lines and tramways, rose from 17,221 kilometers, in 1872, to 37,739 kilometers in 1900. In Russia, within the short period from 1887 to 1900 the mileage of the state railways alone, not including the private lines, rose from 2,928 to 20,346 miles. In the whole of Europe, according to the editor of "L'Economiste Européen", the aggregate railway equipment in operation increased from 134,591 kilometers, on January 1, 1875, to 269,743 kilometers (165,000 miles), on December 31, 1898. The latest figures of railway construction outside Europe and the United States indicate a total of about 93,000 miles, where in 1850 scarcely a mile of road existed, and where even in 1870 there were less than 12,000 miles.

It is not surprising that producing and exchanging power has been enormously increased by this equipment with the means of transportation, and that the world, from being separated into isolated local markets, has become a single great market, in which the staple products of industry compete with each other upon nearly equal terms, whether originating in the mills of England, the pioneer of manufactures, in the shops and homes of France, and Germany, in the new factories of the United States, with their modern machinery, or in the still younger establishments of China, and Japan. It was estimated in a recent article in the French economic periodical, the "Journal des Economistes," that since 1850 a saving in the transportation of commodities has been effected by means of railways, amounting to 12 per cent. of their price; so that without loss to any one, and without regard to economies in production, the necessaries of life can be delivered in any quarter of the world reached by railway traffic, at one-eighth less than would have been possible half a century ago.

The production and useful distribution of the great staples of modern manufacture, coal and iron, has become possible with the extension of railway traffic. The entire production of iron in the world at the beginning of the nineteenth century is reckoned by Mr. James M. Swank at 825,000 long tons, and in 1850, as 4,750,000 tons. The amount rose in 1880 to 17,950,000 tons, in 1890, to 27,157,000 tons, and in 1899 to 39,410,000 tons, of which the United States made 34.56 per cent. The production of steel throughout the world in 1878 was 3,021,000 long tons. Of this large product, which multiplied by 800 per cent within 21 years, the United States made 10,639,857 tons, or 39.25 per cent. The price of steel rails per ton in Pennsylvania mills was \$158.50 in 1868, and \$67.50 in 1880, but fell in 1890 to \$31.75 and in 1898 to \$17.62.

The efficiency of railways and steamships in placing at the command of civilized communities food supplies and other necessaries, has steadily increased since the carrying system of the world approached completion. Agricultural production has been

*"Dictionnaire du Commerce, de l'Industrie et de la Banque," I., p. 829.

stimulated, and farming upon a large scale has become possible because of the reduction of railway charges. The number of farms in the United States increased 215 per cent. from 1850 to 1890, or from 1,449,073 to 4,564,641, and their total improved acreage increased by 216.2 per cent., or from 113,032,614 acres to 357,616,755 acres. The exports of wheat from the United States, which were only 12,646,941 bushels, including flour, in 1866, rose to 186,321,514 bushels in 1880, and to 222,694,920 bushels in 1898. The average price on the farm, which was 152.7 cents in 1876, fell to 95.1 cents in 1880 and to 58.2 cents in 1898. This fall in price, however, due partly to improved farming machinery and implements, was only partly borne by the farmer. The decline in the cost of carriage of wheat has been a vital element. The freight rate per bushel from Chicago to New York was 15.95 cents in 1867, and one bushel in every 5.77 bushels was absorbed by the cost of carriage. The conditions of 1880 showed a reduction in the price of carriage to 12.27 cents, and one bushel at the price then ruling, paid the cost of carrying 10.19 bushels. The conditions of 1890 showed that freight rates had fallen to 5.86 cents per bushel and that 14.16 bushels were carried for the cost of one bushel, at the low price of 83 cents then prevailing. The conditions of 1897 showed a further fall in the freight rate from Chicago to New York to 4.35 cents per bushel, and 17.24 bushels were carried to the seaboard for the price of one, even when that price had fallen to 75 cents per bushel.

Thus, the great reduction in the price of farm products for export has been due in large measure to the increased efficiency of transportation by rail, and the fall in price on the other side of the ocean has been due in nearly equal degree to the increased efficiency of transportation by sea. The mass of consuming laborers, therefore, in the great manufacturing countries of Europe, have profited by their ability to obtain a much larger supply of food for a given product of their own labor than ever before. What has been set forth in regard to wheat is true of other staple products. Anthracite coal, which cost \$3.92 per ton at Philadelphia in 1869, was then carried 200 miles for the price of one ton. The price in 1880 was \$4.53, but the fall in freight rates made it possible to carry a ton 284 miles for an amount equal to its price. Freight rates fell from 1.746 cents per ton, per mile, in 1869 to 1.426 cents per ton, per mile, in 1880, and to 0.863 cent per ton, per mile, in 1890, when the price of one ton represented its carriage for 406 miles. This distance had further risen in 1897, at a freight rate of 0.712 cent per ton, per mile, to 439 miles. The fall in freight rates would stand out still more conspicuously if it had not been accompanied by a fall in the price of coal to \$3.50 per ton in 1897, which diminished by more than one-fifth the sum to be divided by the average charge per ton for freight.

The great equipment of machine production and carriage with which the world was dowered in the nineteenth century, called for great amounts of capital, for the means of gathering up the scattered capitals of individuals into common funds, and for a ready and efficient means of transferring this capital. These means were found in the organization of banking, credit, foreign exchange, clearings, and stock companies. The scanty supplies of metallic money available in the civilized world in 1800 would have been pitifully inadequate to transact the great business of the closing decades of the century. Even the increase in these supplies, which raised the average gold production of the world from \$16,000,000 per year for the first half of the century to \$300,000,000 in its closing years, would have been insufficient to carry on modern business without the extension of the mechanism of credit. This mechanism, in the form of organized banking and the issue of circulating paper money, was hardly known outside of London at the beginning of the nineteenth century. The old specie banks had been destroyed, the Bank of France was about to be organized, and the limited circulation of the Bank of Vienna was under suspicion because of the counterfeiting of its notes by Napoleon. The

Bank of France was the oldest of the central banks of the European continent, and it was not until the middle of the century that similar institutions spread in the other countries of Europe. Belgium was dowered with a national bank in 1850; banks sprang up in Spain, in Italy, in the states of Switzerland, and all over Germany; but it was not until 1860 that the Bank of Russia was put upon a firm basis, and not until 1875 that the Imperial Bank of Germany succeeded the Bank of Prussia and established a uniform note circulation for the new German Empire. The money supply of the world, estimated in 1800 at \$2,840,000,000, had risen at the beginning of 1900 to \$11,600,000,000, of which \$4,841,000,000 was in gold. The gold money of the world was estimated for the leading countries at only \$1,209,800,000 in 1873 and at \$3,901,900,000 in 1893. The total stock of money increased more than 100 per cent. within the generation ending with 1900, and the gold basis upon which it rested was multiplied by four.

The banking power of the leading commercial countries is even greater than is indicated by these statistics of the supply of coin and paper money. The European banks of issue increased their deposit accounts from 2,314,000,000 francs at the close of 1875, to 9,321,000,000 francs (\$1,800,000,000) at the close of 1899, while their note circulation increased from 9,699,000,000 francs to 14,992,000,000 francs (\$2,900,000,000). The banks of Great Britain alone showed deposits in January, 1900, of about £870,000,000 (\$4,230,000,000). These figures, moreover, are independent of the colonial banks with London offices, and of the banks that are nominally foreign, but that have London offices and that are chiefly owned by Englishmen. These classes of British banks had deposits at the close of 1899 amounting to about £234,000,000, making the total deposits in British banks, scattered over Australia and other British dependencies, about £1,100,000,000 (\$5,500,000,000). The United States is an equally large contributor to the banking resources of the world. The combined deposits of all the banks of the United States was given by the Comptroller, on or about June 30, 1900, as \$8,513,030,125 and the combined banking power, including capital and surplus, as \$9,146,017,917. This afforded an average banking power per capita, in the United States, of \$118.42, and showed a great increase within a few years. The banking power represented by corresponding figures as recently as 1895, was only \$6,703,544,084, or \$95.83 per capita. The gross increase, therefore, in five years, amounted to more than 35 per cent.

The banking power of the entire world was estimated by Mr. Mulhall, the English statistician, at \$1,540,000,000 in 1840, but it rose, in 1890, to about \$15,000,000,000. The increase within the next ten years, according to an estimate by the Comptroller of the Currency of the United States, was more than 67 per cent., and this carried the world's credits, and the money upon which they were based, to £5,369,000,000 (\$26,000,000,000). An illustration of the remarkable growth in the employment of banking power is afforded by the organization and use of clearing houses in the leading commercial countries. In the United States, the clearings reported for the calendar year 1899 at all cities having clearing houses, were \$88,909,661,776. The income of all workers, in all occupations, was probably about \$10,000,000,000. The transactions through the clearing houses, therefore, representing the multiplied activities necessary to produce such net earnings, were nine times their amount. In France, the payments into the Bank of France in 1899 were 146,930,700,000 francs (\$28,370,000,000), which is about seven times the national income. In the case of Great Britain, the clearings at London in 1899 were 9,150,269,000 (\$44,600,000,000), which is about five times the national income. An indication of the growth of clearings in these three principal countries, reduced to American money, is afforded by the following brief comparative table:—

YEAR	NEW YORK	LONDON	BANK OF FRANCE
1870.....	\$27,804,539,406	\$20,000,000,000	\$ 9,460,000,000
1880.....	37,152,128,621	28,200,000,000	14,530,000,000
1890.....	37,660,686,572	38,100,000,000	16,000,000,000
1899.....	57,368,230,771	44,600,000,000	28,370,000,000

This great structure of credit has grown up almost entirely within half a century, as a necessary factor in the new machinery of production and exchange. The early banks were conducted mainly with the capital of their own shareholders, and the fortunate few who had accumulated wealth by patient industry, colonial trading, or by more questionable methods. It remained for the last half of the century to bring to all the banks in the advanced civilized countries a flood of the saved capital of people of small and moderate means. The new conditions of production, with higher wages for labor, and the increase in the proportions of the professional classes, gave the ability to save, without the sacrifice of comforts, to hundreds of thousands of men, who, under earlier conditions, would have been barely able to maintain the struggle for existence. Hence came the great increase in deposits in the commercial banks and the creation of savings banks for the masses. There came also, as a necessary incident to the gathering of capital for the manufacturing and for railway construction, the issue of titles to wealth in a new form, representing divisible shares in these new enterprises.

This new form of wealth, almost wholly a creation of the free play of capital under modern conditions, consists of the shares, and bonds, of stock companies. The principle of limited liability, which applies to most stock companies, is of comparatively modern development. A limited company is one in which the shareholders are liable for the debts of the company only to the amount of their shares, or sometimes to double the amount, according to the law governing the subject. In the absence of such laws, they would be liable for all the debts of the company with their entire property as are the members of a private firm. The principle of limited liability permits a man to embark with many others, in a large enterprise, with exact knowledge of the amount that he risks. Few men would care to buy railway shares or bank capital if they ran the *risk* of having their entire fortunes appropriated to pay the debts of the railway in case it went into the hands of a receiver, or if they were compelled to pay all the depositors of a bank in case of failure. Limited liability is essential, therefore, to induce the owners of capital to go into such enterprises; it is, also, a matter of convenience in subdividing their expense, and in combining, under a single management, the savings of many hundreds, and even thousands, of persons. It permits the man with saved capital to invest it in profitable enterprises without exercising personal supervision over his investment, except so far as he wishes to participate in meetings of shareholders to secure honest and efficient control.

Government debts — the first form of negotiable securities — gradually paved the way for the issue of railway bonds, and stock, and of shares in manufacturing, and other industrial enterprises. The remarkable growth in capital, and its issues, in the form of securities, is indicated by the fact that in 1789, the number of securities listed on the Paris Stock Exchange was only 17, and as late as the year 1815, the shares of only 30 companies were listed in London, 20 in Paris, and 11 in Berlin. In 1897, the number of French securities admitted to the official exchange was 493, representing a nominal capital of 59,142,400,000 francs, or more than eleven thousand millions of dollars. There were also admitted to the official stock exchange 236 foreign securities, representing

French investments abroad of about 26,000,000,000 francs. Great Britain easily leads the world in the volume of her stock exchange business. The value of her securities was computed in 1895 at £7,246,902,726, or about \$36,000,000,000. This represents more than all the wealth of Great Britain or the United States at the beginning of the century, and perhaps more than all the wealth, exclusive of land, held in the civilized world at that time. A calculation, made under the auspices of the International Statistical Institute, in 1895, put the total transferable wealth of the leading European countries, including stock exchange securities, mortgages, and savings deposits, at \$85,000,000,000. An annual computation which is made in Brussels by the leading financial journal there, the *Moniteur des Intérêts Matériels*, puts the issue of new securities in Europe at 9,129,054,150 francs in 1896; 8,911,870,530 francs in 1897; 8,902,776,660 francs in 1898, and 10,577,406,550 in 1899. Thus not less than \$1,800,000,000 in new savings entered in the field in each of these years, seeking new investments.

These large issues of new securities have naturally been accompanied by a great increase in the number as well as in the capitalization of stock companies. An outburst of activity in the creation of such companies has been one of the marked features of industrial activity in the leading civilized countries. In Great Britain, the organization of companies was 1,302 in 1880, with a total capital of £168,466,322, which rose in 1890 to 2,789 with a capital of £238,759,472; in 1898 to 5,182, with a capital of £272,287,690; and in 1899 to 4,980, with a capital of £247,871,414 (\$1,200,000,000). The figures regarding the companies actually continuing in business from year to year, showing the sifting out of the incompetent, and the gradual additions to working capital of the more efficient, afford a more accurate test of the accumulated capital resources of the country. The total number of such companies was estimated in April, 1884, to be 8,692, with a paid-up capital of £475,551,294. The total rose more than 50 per cent. by April, 1890, when the number was 13,323, and the paid-up capital was £775,139,553. A further increase carried the number in April, 1899, to 27,969 and the paid-up capital to £1,512,098,098 (\$7,400,000,000).

In Germany, the organization of the empire under a common head, and the large fund of capital brought into the country by the war indemnity paid by France, resulted in a stimulus to the creation of stock companies, which caused the creation of 479 in 1872, with a capital of 1,477,700,000 marks (\$360,000,000), and 242 in 1873, with a capital of 544,200,000 marks. Then came the effects of the crash of the latter year, which reduced the organization of companies to a minimum of 42 in 1876, with a capital of 18,200,000 marks. There was a slight revival of activity in 1880 and in 1889, but it was only with the year 1895 that the creation of stock companies upon a more solid basis again attained striking figures. The number of companies organized in 1895 was 161, with a capital of 250,700,000 marks; 1896, 182 companies, with a capital of 268,000,000 marks; 1897, 254 companies, with a capital of 380,500,000 marks; 1898, 329 companies, with a capital of 463,600,000 marks; and 1899, 364 companies, with a capital of 544,400,000 marks, (\$135,000,000). The growth of corporations in Russia has been even more remarkable. The capital of all stock companies organized during the nineteenth century, up to the close of 1899, was about 2,383,000,000 rubles (\$1,200,000,000), or as much as the issues of the single year 1899 in Great Britain. But of this amount more than half was authorized during the five years beginning with 1895. The highest record reached prior to that year was in 1890, when the issues of capital were 63,415,000 rubles. The issues for 1895 rose to 129,363,000 rubles; 1896, 232,640,000 rubles; 1897, 239,424,000 rubles; 1898, 256,237,000 rubles, and 1899, 358,354,812 rubles (\$187,000,000).

The equipment of the civilized world for grappling with the new conditions of transportation and exchange would still have been incomplete, in spite of the spread of the railways, and the accumulation of transferable capital, but for the series of inven-

tions which promote quick communication. The post-office, the telegraph, the ocean cable, and the telephone, were an almost necessary supplement of the more substantial and visible instruments of the new economic order. In Great Britain and in the United States, the use of the mails doubled within the twenty years which closed the nineteenth century. The number of letters delivered in the United Kingdom of Great Britain and Ireland, rose from 1,165,000,000 in the fiscal year 1881 to 2,246,800,000 in 1900. The average number per capita rose in the meantime by more than 60 per cent., from 34 to 55. The number of newspapers and packets delivered increased by more than 130 per cent., from 364,000,000 in 1881 to 866,200,000 in 1899. In the United States, an exact account is not kept of the number of pieces of mail matter handled, but an illustration of the progress made is afforded by the number of postage stamps and other pieces of stamped paper which are sold at the post-offices. The number of pieces of stamped paper thus issued was 1,490,773,498 in 1881, representing a face value of \$34,483,503. The amount substantially doubled in 1890, when the number of pieces was 3,183,741,338, and their value was \$59,458,054, and nearly trebled for the fiscal year 1900, when the number of pieces was 5,283,687,010, and the face value was \$97,640,897. Thus, within nineteen years, with an increase of about fifty per cent. in population, there was an increase of nearly two hundred per cent. in the postal expenditure of the people, and their per capita postal expenditures rose from 70 cents to \$1.30.

In France, the number of letters passing through the mails increased more than sixty per cent. from 1860 to 1881, and nearly fifty per cent. from 1881 to 1898. The number of letters delivered in 1860 was 265,352,000, which rose in 1881 to 481,130,349, and in 1898 to 718,252,123. The increase was much more striking in the delivery of newspapers and other printed matter, which rose from 179,138,000 pieces in 1860 to 687,692,521 pieces in 1881, and 1,214,039,377 in 1898. In Belgium, the delivery of letters rose from 73,419,058 in 1880 to 146,496,146 in 1898, and the delivery of newspapers increased in nearly corresponding ratio, from 71,830,000 in 1880 to 122,451,701, in 1898. In Germany, the increase in letters received was from 565,528,000 in 1875 to 731,755,000 in 1880, to 1,437,948,000 in 1890, and to 2,181,924,000 in 1898. In Austria, the letters handled increased from 26,071,000 in 1850 to 148,499,000 in 1870, to 538,273,000 in 1890, and to 922,807,000 in 1898. The classification of packages differs, one country from another, but substantial uniformity, from year to year, within the country, permits comparisons which show the phenomenal growth of recent years.

The increase in the use of the telegraph and the telephone has been even more phenomenal. In Great Britain, the number of messages sent rose from 29,966,965 in the fiscal year 1881 to 62,368,034 in 1890 and 90,415,123 in 1900. A great increase occurred after 1885, when the minimum charge for an inland dispatch was reduced from a shilling (25 cents) to sixpence (13 cents). In the United States, the number of miles of wire operated by the Western Union Telegraph Company rose from 112,191 in 1870 to 874,420 in 1898, and the number of offices from 3,972 to 22,210. The number of messages sent increased in the same interval from 9,157,646, at an average charge of 75.5 cents, to 62,173,749, at an average charge of 30.1 cents. The Postal Telegraph Company increased its length of wires from 23,587 miles in 1885 to 143,290 miles in 1898, while the number of messages rose from 1,428,690 to 15,407,018.

In France, the length of telegraph lines rose from 70,277 kilometers (43,650 miles) in 1881 to 130,830 kilometers in 1898, and the kilometers of actual wire from 215,136 to 590,713 (366,800 miles). The number of messages increased within seventeen years by 116 per cent., from 18,561,038 in 1881 to 40,146,720 in 1898. The use of local telephones, which was not a factor in communication in 1881, amounted to 123,561,310 messages in 1898. In Germany, the length of telegraph lines rose from 15,048 miles in 1870 to 37,236 miles in 1880 and to 76,601 miles in 1898. The length of wire, which was 50,287

miles in 1870 and 132,476 miles in 1880, rose in 1898 to 314,405 miles. The number of home messages, which was only 4,731,919 in 1870 and 9,448,126 in 1880, was 26,186,021 in 1898. These figures are exclusive of Würtemberg and Bavaria, two large German states, whose telegraph mileage is more than 14,000, and where the number of messages sent in 1898, within the two kingdoms alone, was about 1,800,000, and the number sent to foreign countries and to other German states was more than 4,000,000. In Belgium, the mileage of lines rose only from 3,451 in 1880 to 3,961 in 1898, because of the comparatively complete equipment of the small area of the country on the earlier date, but the number of home messages increased more than 50 per cent., from 2,031,426 in 1880 to 3,113,715 in 1898, and the number of international messages by nearly 150 per cent., from 1,035,655 in 1880 to 2,523,654 in 1898.

The total length of the telegraph and cable wires of the world, according to an estimate presented by O. P. Austin, Chief of the Treasury Bureau of Statistics, at the beginning of 1899, was 2,300,000 miles. The length of the land lines was put at 662,000 miles, representing a cost of \$310,000,000, and the length of ocean cable lines at 170,000 miles, representing a cost of \$250,000,000.

What has been set forth in regard to producing power, railway equipment, banking power, and means of communication, represents in a sense the machinery of modern production rather than its results. This splendid equipment has been in operation for so brief a period that its full capacity has only begun to be tested, but already its powers have been demonstrated by a greatly increased manufactured product, an enlarged volume of trade between nations, and new standards of comfort for the masses of men. The aggregates of the world's commerce, already presented, almost fail of their proper impression by their very magnitude. It will be well, therefore, to set forth a little more in detail the progress of the closing decades of the nineteenth century. From 1870 to 1900, the wealth of the United States rose from \$30,068,518,507 to \$94,000,000,000—an increase of 200 per cent. in a generation, while population advanced only half as rapidly,—from 38,558,371 to 76,295,220. The ratio of wealth per capita, therefore, rose from \$779.82 in 1870 to \$1,232 in 1890. Exports of American merchandise kept pace with the growth of wealth and exports of manufactured articles with phenomenal rapidity, when American prices were brought down to the level of those of the world after the panic of 1893. Some conception of the recent progress of this movement may be formed from these figures:—

MERCHANDISE EXPORTS FROM THE UNITED STATES

YEAR ENDING JUNE 30	TOTAL EXPORTS	EXPORTS OF MANUFACTURES	
		VALUE	PER CENT.
1860	\$ 316,242,432	\$ 40,345,892	12.76
1870	455,208,341	68,279,764	15.00
1880	823,946,353	102,856,015	12.48
1890	845,293,828	151,102,376	17.87
1895	793,392,599	183,595,743	23.14
1898	1,210,291,913	290,697,354	24.02
1900	1,394,483,082	433,851,756	31.55

The growth of wealth, and foreign trade, was equally remarkable in the case of Great Britain. Exports of British products were £51,308,000 (\$250,000,000) in 1840,

and had already risen, in 1870, to £199,640,000 (\$975,000,000); but the amount rose in 1890 to £263,530,585. The increase was not material in later years, because the additions to British capital began to be employed abroad instead of swelling production at home. This resulted in making the borrowing countries tributary to Great Britain, who was able to take her dividends in a great excess of merchandise importations over exports. Imports of merchandise rose from £370,967,955 in 1885 to £485,035,583 (\$2,365,000,000) in 1899. The property and profits assessed for the income tax, which stood at the respectable total of £137,823,000 (\$680,000,000) in 1815, rose to £527,675,000 in 1877, to £626,356,000 in 1890 and £719,162,000 (\$3,500,000,000) in 1899. Thus the brief period of twenty-two years witnessed an increase of assessable property amounting to £190,000,000, or more than thirty-five per cent.

A necessary consequence of the increased productive power of the civilized world has been the increased comfort of the masses. While it is sometimes contended by those who have not carefully examined the facts, that "the rich are growing richer and the poor, poorer," the statistics bearing upon the subject generally go to sustain only the first half of the proposition, and to disprove the last half. While it may be true that the distribution of the new wealth has not been altogether equitable, it has been almost inevitable that some portion should fall to the laboring masses, because of the employment of the great bulk of modern wealth in ministering to luxury or to new production. Wealth which is not kept in idle hoards tends to develop new industries, to increase the demand for labor, and to thereby raise wages by intensifying the competition for labor. There are several interesting statistical facts that tend to support the view that the comfort of the masses materially increased during the nineteenth century, and that the number of persons enjoying some of the luxuries of life greatly increased in proportion to the whole population. Careful inquiry by such competent authorities as Col. Carroll D. Wright, the United States Commissioner of Labor, shows that wages in all the chief lines of manual labor were much higher at the close of the century than at its beginning.

Advances in wages were slow during the Revolutionary, and Colonial, period, but the advance in mechanical industries began after the introduction of the factory system. In 1790, carpenters were paid less than 60 cents a day. This rose to \$1.09 in 1810 and to about \$1.40 in the North by 1840. Laborers, paid 43 cents a day in 1790, were receiving from 87.5 cents to \$1.00 by 1860. Shoemakers, who received 73.5 cents in 1790, were paid \$1.70 in 1860. The average wages during the ten years ending with 1860 gave to agricultural laborers, \$1.01 per day, to blacksmiths, \$1.69, to carpenters, \$2.03, to masons, \$1.53, to mill operatives, 87 cents.

Then came the great outburst of railway building, and machine industry, which made the closing decade of the century so notable in economic history. The subject of wages and hours of labor, during this period, was carefully investigated under the authority of the Senate Committee on Finance, by Professor Roland P. Falkner, in 1891. The result reduced all wages to percentages based upon those of 1860 as the unit. The figures showed that when wages were reduced to a gold basis, they averaged in 1840 87.7 per cent. of the wages of 1860. Then came the period of greenback issues during the Civil War, when wages in paper were high, but represented only 66.2 per cent. in gold of the rates of 1860. The upward movement was rapid as the premium on gold fell, and the gold wages of 1872, when prices were also high, were 152.2 per cent. of those of 1860. There was a fall during the years of depression that carried wages as low as 135.2 in 1876, but even at this time, their purchasing power was probably quite as large as in 1872, because of the fall in prices of nearly all manufactured articles and of other necessities of life. Then began a new upward movement in gold wages, which carried them in 1880 to 141.5 per cent. of the rates of 1860, to 158.9 per cent. for 1890, and to 103.43 per

cent. of the wages of 1891 for the year 1900. This upward movement of wages went on while the average working hours, which were 11.4 in 1840, fell to eleven hours in 1860, to ten and a half hours in 1870, to 10.3 hours in 1880, and to ten hours in 1889. This was the average of all leading mechanical industries, including some in which long hours still prevail, but others in which the time has fallen considerably below ten hours per day. Comparing the hours of labor with the rates of wages, it appears that the amount of money now paid is, substantially, twice that paid half a century ago for a day which is at least thirteen per cent. shorter than that under the smaller wages.

The upward movement of wages has been accompanied by the downward movement of prices. This proposition would seem a paradox, if there had not been so great an increase in the efficiency of labor by means of machinery. A simple average of prices for all commodities, taking 1860 as the unit, showed average prices for the five years ending with 1844, of 108.8; which advanced during the paper money period as high as 178.8 for the five years ending with 1869, but fell to 105.3 for the five years ending with 1884, to 93.2 for the five years ending with 1899, and to 92.3 for 1891. The purchasing power of wages, therefore, is considerably greater than is their nominal increase in money. If this fact is not clear to all wage earners, it is largely because there are so many articles, like glass, chinaware, wall paper, carpets, and finer grades of clothing, that are now considered necessaries in the life of the laborer, but that were not enjoyed at all, or only in inferior qualities, when the productive power of the human race was smaller.

Definite proof of the increased consumption of high grade food products, by the masses, can be found in the statistics of certain countries. The British returns of colonial products imported per capita are among the most authentic of these statistics, and they reveal some astonishing results. The table which follows shows the per capita consumption of sugar, tea, and tobacco, in the United Kingdom for representative fiscal years:—

(IN POUNDS PER CAPITA)

YEAR	SUGAR		TEA	TOBACCO
	RAW	REFINED		
1840.	15.20	.....	1.22	0.86
1880.	53.98	9.42	4.57	1.42
1885.	59.05	15.89	5.06	1.46
1890.	44.99	28.22	5.17	1.55
1895.	48.04	40.09	5.67	1.67
1898.	39.89	45.29	5.86	1.83
1899.	35.63	48.68	5.98	1.89

These figures show that within the past sixty years the consumption of tea by the British people has increased more than fourfold per head, and that the consumption of tobacco has more than doubled. The increase since 1880 has been more than 25 per cent. in tea, and an equal amount in tobacco. These figures show not only a great increase in the quantity of these articles consumed,—articles which would have been rated by the laborer of a century ago as unattainable luxuries,—but they show a surprising demand for the best article of its kind on the market, in the increased proportion of refined sugar used, in place of the brown raw sugar, which was so generally consumed, even by the well-to-do, before the price of refined sugar was forced down by competition, and by the adoption of the most efficient methods of refining.

With these proofs of larger earnings, shorter hours, and better living for the masses, may be put the evidence of wider opportunity through the increase in the numbers of the professional classes. This increase is due primarily to the fact that there is a larger surplus in the community than in previous generations, above what is required for food, clothing, and shelter. If the labor of four-fifths of the population were required to produce living necessities, in an early age of civilization, and some improvement in machinery or in methods of production enabled three-fifths to produce such necessities, it is clear that one-fifth of the population would be released for producing things which could not be enjoyed at all before. Hence comes the multiplication of lawyers, physicians, literary and pictorial artists, and the ability of civilized countries to bear a heavy burden of taxation for building roads, improving harbors, paving and lighting city streets, and for providing a complete education for every citizen.

The greater social wealth explains the remarkable increase in public expenditures, which has excited alarm in some quarters during the past generation. In Great Britain, the expenditures of 1871 were £69,548,539 (\$339,000,000), but this amount rose in 1899 to £108,150,236 (\$540,000,000).—an increase of more than fifty per cent. within a generation. If the charge for interest on the debt and sinking fund were taken out, amounting to about £25,000,000 per year, the advance on account of other expenditures would be from about £45,000,000 in 1871, to £83,000,000 in 1899, an increase of about 84 per cent. within a generation. In the United States, the expenditures of the Federal Government were only \$1.39 per capita in 1842, and had risen in 1860 only to \$2.01 per capita. Within less than a generation, in 1886, expenditures per capita had risen to \$4.22. This was the lowest point touched after the Civil War. Expenditures rose in 1897 to \$5.01 per capita, or to two and a half times what they were in 1860, and in later years, under the influence of the War with Spain, to still higher figures. In France the entire public budget in 1812 was about \$225,000,000, which has been increased in recent years to more than \$600,000,000.

If these figures tend at first to cause misgivings, they take on a different aspect when the objects of expenditures are examined. The increase in expenditures has been applied largely to improvements which would not have been possible under the scale of production prevailing a century ago, or a generation ago. While grinding taxation under the old *régime* in England, France, and other countries, supported a few of the ruling class in magnificence, roads were bad, harbors were unimproved, city streets were badly paved, sanitation was ignored, there was no efficient protection against fire, and thieves and other criminals pursued their calling almost unwhipped of justice. Under modern conditions, the many enjoy the proceeds of public taxation, which formerly went for the luxuries of a few. Fine roads, safe harbors, well-paved streets, fine parks, are only a few of the many benefits conferred by the modern system of taxation. Many branches of scientific inquiry, tending to new discoveries and to length of life, are now conducted under the government supervision, while an efficient police system, scientific sanitation, and popular education, have become the common-place privileges of the citizen of the modern state.

How rapid, and how essentially recent, has been this growth in the public services extended to the masses, may be judged by a few illustrations. In the United Kingdom of Great Britain and Ireland, in the fiscal year 1868, total expenditures for local purposes were £36,132,834 (\$176,000,000). The amount of such expenditures rose to £70,708,002 in 1891, and to £103,137,817 (\$503,000,000) in 1898. Here was a nearly threefold increase in thirty years. Examination of the items shows that expenditures for police, sanitation, and other public institutions, rose from £14,423,632 (\$70,000,000) in 1868 to £35,502,816 in 1891, and to £54,632,147 (\$266,000,000) in 1898. Expenditures by harbor authorities swelled from £2,581,796 in 1868 to £5,598,263 in 1898. The ex-

penditures by school boards were not given in 1868, but were probably not more than £4,000,000. The amount in 1885 was only £6,385,207, but this increased in 1898 to £12,304,456 (\$60,000,000). Thus while total expenditures increased nearly threefold, expenditures for those objects which directly serve the comfort and education of the people increased much more than threefold. In the United States, according to some statistics carefully prepared by Secretary Gage, salaries paid to school teachers rose from \$37,832,556 in 1870 to \$55,942,972 in 1880 and to \$123,809,412 in 1899. River and harbor improvements, for which only \$221,973 was spent in 1860, and only \$8,976,500 in 1880, required \$20,785,049 in 1898. The lighthouse establishment, which cost \$835,373 in 1860 and \$1,767,515 in 1874, called for \$3,556,840 in 1900. The postal service, which called for an expenditure of only \$29,084,946 in 1873, called for \$65,930,717 in 1890, and for \$109,585,358 in 1900. That even in the colonial establishments, public expenditure is now devoted largely to objects of benefit to the people, is shown, in a striking manner, by the budget for the French province of Algeria for 1901. Out of a total proposed expenditure of 55,237,675 francs (\$11,000,000) nearly one-half was for the five items, education, justice, public works, agriculture and forests, and postal and telegraph service. Public instruction called for 6,656,629 francs; justice, 2,731,300 francs; public works, 10,760,130 francs; agriculture and forests, 4,326,434 francs; and postal and telegraph service, 6,424,544 francs.

These figures illustrate only a few of the many services rendered by modern governments to the people. The growth of commerce, and the struggle among the nations for commercial power, are producing new conditions, which call in some cases for the aid of the state in performing works which could not well be performed by private enterprise. The building of ocean-going steamers of nearly thirty feet draft requires the deepening of harbors to float them. Hence the call, within the last few years, for liberal appropriations for such purposes. First-class dock privileges, perfect systems of buoys and lighting, and thorough surveys of dangerous coasts, are a part of the machinery of modern commerce which no government can neglect without endangering millions of valuable property, and putting its people at a disadvantage in the struggle for commercial power. The best technical, as well as the best general, education is another factor in the efficiency of competition between modern peoples, and money spent by the state in such education is likely to be repaid many fold by the superiority in technical skill and by the capacity for conducting great enterprises, which are given profitable direction, if they are not created, by proper education.

Increased productive power, and increased earnings among the mass of men, largely the result of machinery and of modern methods of transportation, afford the means for paying heavier taxes and for obtaining the benefits of modern education, sanitation, and commercial development. These charges have perhaps increased in a larger proportion than has the total increase in income, but a little consideration will show that even this condition does not impose undue burdens. If the entire efforts of a community were required in early times to produce its food, clothing, and shelter, and a surplus large enough to maintain the bare rudiments of government and professional life, most of the surplus resulting from increased productive power under modern conditions is available for the last two objections alone. Let it be supposed that the productive power, in 1870, of the average individual in the community was represented by eleven units, and that ten of these were required for food, clothing, and shelter, leaving the additional unit for taxes, amusements, and luxuries. It is clear that if productive power were increased by only one unit, the amount which could be spent upon better public service, and paid to the professional classes for better medical service, more careful protection of legal rights, artistic enjoyment, and for other luxuries of living, would be doubled. An increase of one more unit, representing only one-eleventh of the

original productive power, would permit three times the old rate of expenditure for the less necessary and higher things of life. This simple mathematical statement makes clear some things, otherwise puzzling, in modern industrial development. It shows, in a way, why increases in taxation, in the number of the official classes, and in the expenditures of the people for luxuries and amusements have multiplied many times in recent years without the effect, which has been feared in some quarters, of impairing the savings of the masses or the wealth of the community. While much remains to be done, therefore, to increase the productive power of the world, and a better distribution of the earnings of the community may become possible in the future, it is evident that progress has been made within the last century, and especially within the last generation, which offers a bright promise for the future of humanity.

Ninety Six.—A village of South Carolina, the scene of an unsuccessful siege by the Americans under General Greene, 1781.

Nineveh.—In ancient geography, the capital and one of the principal cities of the Assyrian Empire. Excavations upon the site of Nineveh have led to the discovery of many valuable antiquities.

Niobe.—In Greek mythology, wife of Amphion, king of Thebes. For boasting of her children, the latter were killed by the arrows of the light-deities. (See 3554.)

Nipissing, Lake.—In the province of Ontario, Canada, a lake having its outlet in Georgian Bay (an arm of Lake Huron). Length, about 50 miles.

Nipmuc Indians.—A general name for the Indians of several tribes inhabiting, in early colonial days, central Mass. and extending into Conn. and R. I. The majority of the Nipmucs did not at first join Philip in his war against the colonists, but were active against the English during the struggle in Conn. in 1675. In Jan., 1676, the remnant of King Philip's tribe with the Narragansett, the Quaboag, and the River Indians, joined the Nipmucs, and on the defeat of Philip fled north and west. The word Nipmuc means "fresh-water fishing place."

Nirvana.—1707.

Noah, Hud, and Salih (Arabic legend).—1430.

No Chance.—4213.

No Man's Land.—(1) A small island a few miles from Martha's Vineyard, Mass. (2) A district ceded by Texas to the U. S. in 1850, and now constituting Beaver Co., in Oklahoma.

Nominations.—In politics, an act of designation as a candidate for office, the ratification of which depends upon another person or body of persons. The President nominates to the Senate candidates for high Federal offices and makes the appointment only after approval. The

head of an executive department nominates to the President those whom he desires as his subordinates in the higher official positions. A national, state, city, county, or town convention of a political party nominates its candidates for office in anticipation of election.

Non-Importation Agreement.—An agreement, first made in 1765 by the merchants of Boston and New York, and in 1774 between the American colonies, in the Continental Congress, to import no merchandise from Great Britain. It was in retaliation for the Stamp Act.

Non-Intercourse Act.—An act passed by the U. S. congress in 1809, prohibiting commercial intercourse with Great Britain and France, in retaliation for the injury done by the vessels of those nations to American commerce.

Nordau, Max Simon.—An author and physician, born in Buda-Pesth in 1849, and removed thence to Paris. His works have been translated into English and are widely read.

Nordica, Madame Lillian.—Born, 1858. A famous soprano singer.

Norfolk.—A seaport in Norfolk Co., Va., one of the largest cities in the state, and a naval station; an important center of trade and the terminus of several steamer lines. Pop. (1900), 46,624.

Norfolk (Va.), Burning of.—In November, 1775, Lord Dunmore, the royal governor of Va., after an unsuccessful attempt to drive out some militia that were encamped near the town, withdrew, sailing away in a British vessel that lay in the Elizabeth River. The militia of Va., Md., and N. C., under Col. Woodford and Col. Howe, thereupon occupied the town. On Jan. 1, 1776, Dunmore returned, bombarded and set fire to the town. The Americans completed its destruction in order to prevent it from falling into the hands of the British.

Norfolk (Va.), Evacuation and Recapture of.—At the beginning of the Civil War, Norfolk was important by reason of its large navy yard and depot of naval supplies that belonged to the U. S. In order to prevent these from falling into the hands of the Confederates, the commandant burned all the government buildings and stores, and burned or sunk all the vessels. He then evacuated and the Confederates occupied the place. Among the vessels sunk was the iron-clad "Merrimac," afterward famous for the battle



NIRVANA

with the "Monitor." (See "MERRIMAC," THE). At the approach of McClellan's army the Confederates, in May, 1862, abandoned Norfolk, which from that time on remained in the possession of the U. S.

Normans.—The sea-rovers from Norseland who settled in France and founded the district of Normandy, under Rolf or Rollo the Ganger in 912.

Norman's Woe.—A dangerous reef near the entrance to Gloucester Harbor, Mass.

Norris, William Edward.—Born, 1847. A popular English novelist.

Norristown.—The capital of Montgomery Co., Pa., manufacturing interests. Pop. (1900), 22,265.

Norse Element in English, The.—3017.



THE THREE BEARS

Norse Fairy Tales.—1334.

Norsemen.—The natives of the ancient Scandinavian Peninsula (Norway and Sweden). It is recorded in the Sagas of Scandinavian heroes that the Norsemen visited the coast of America as early as 861 A.D., but such stories are unfortunately intermingled with fiction and legend.

Norse Mythology.—1631.

The Eddas, 1635.

The Creation, 1636.

The Gods of Asgard, 1637.

Ygdrasil and the Norns, 1639.

Odin, 1639.

The Death of Balder, 1640.

Thor, 1642.

Vidar, 1643.

Tyr and Heimdall, 1644.

The Vans, 1645.

Ragnarok, 1645.

North, Frederick Lord.—(1732-1792.) An English leader of the House of Commons. The American War was largely due to his folly. He became prime minister in 1770. The last five years of his life were passed in total blindness.

North Adams.—A town in Berkshire Co., Mass.; cotton, wool, and leather manufactures. Pop. (1900), 24,200.

North American Fairy Tales.—1357.

Northampton.—(1) A town in Hampshire Co., Mass., on the Connecticut River, 17 miles from Springfield. Pop., 18,643. (2) The capital city of the English county of the same name, noted for its antiquity. Pop., 61,016.

North Anna.—A small stream in northern Va., famous for the battle between the forces of

Gen. Grant and Gen. Lee, May 23, 1864, the result of which was not decisive.

North Carolina.—One of the thirteen original states of the American Union. It lies on the Atlantic coast, immediately south of Virginia. The surface is low and flat in the eastern, hilly or of the nature of a plateau in the central, and mountainous in the western part. It is an agricultural state, the chief products being corn, cotton, tobacco, and rice. It was first settled about 1660, and became a royal province in 1729. The "Mecklenburg Declaration of Independence" was passed in 1775, thus anticipating by a year the declaration made by the Continental Congress in Philadelphia. The state adopted the U. S. Constitution in 1789, seceded May 20, 1861, and was readmitted to the Union in July, 1868. Area, 52,250 sq. miles; pop. (1900), 1,893,810. Called the Old North State, the Turpentine State, and the Tar-heel State.

North Christopher.—The pseudonym of John Wilson, an eminent Scottish contributor to Blackwood's Magazine.

North Conway.—A summer resort in Carroll Co., N. H.

Northcote, Sir Stafford Henry.—(1818-1887.) An English statesman and leader of the Conservative party in Parliament, in which position he succeeded Earl Beaconsfield.

North Dakota.—One of the North Central States of the U. S. of America, bounded by Canada, Minn., S. D., and Mont. Its capital is Bismarck. The land is almost entirely prairie, the surface, with the exception of the so-called "bad lands," being largely flat. It produces a high grade of wheat in enormous quantities. It was admitted to the Union in 1889. Area, 70,795 sq. miles; pop. (1900), 319,146.

Northeastern Boundary.—In 1783, the northeastern boundary of the U. S. was, by treaty with Great Britain, defined as extending from the source of the St. Croix River north to the watershed between the Atlantic and St. Lawrence systems; along those highlands to the northwesternmost head of the Connecticut River. This boundary, being source of dispute between the Americans and Canadians, it was decided to settle the matter by arbitration. In 1831, the king of the Netherlands, as arbitrator, made an award unsatisfactory alike to Great Britain and to the U. S. The present boundary was fixed by the Webster-Ashburton treaty of 1842, the U. S. securing about seven-twelfths of the disputed territory, and Great Britain the remainder.

Northern Liberties.—A former district of Pennsylvania, now included in the city of Philadelphia.

Northern Virginia, Army of.—A division of the Confederate army during the Civil War occupying for the most part the space between Richmond and Washington, and charged with the specific duty of defending Richmond. For a short time it was commanded by Gen. Joseph E. Johnston and afterward by Gen. Robert E. Lee, with whose name the army is historically identified. The fighting strength, varying from 50,000 to

- 90,000 men, was tested on many a bloody field, including Bull Run (2 battles), Antietam, Fredricksburg, Chancellorsville, Gettysburg, Wilderness, Spottsylvania, Cold Harbor, Petersburg, Five Forks, and Sailor's Creek. Gen. Lee surrendered what was left of his army to Gen. Grant at Appomattox, April 9, 1865.
- North Park.**—A plateau in northern Col. Area, about 2,000 sq. miles. Elevation, about 8,500 ft.
- North Point (Md.), Battle of.**—Sept. 12, 1814, three days after the British army, 9,000 strong, had partly burned Washington, it landed at North Point, 12 miles from Baltimore, which was then defended by Gen. Samuel Smith with about the same number of troops. Gen. Smith sent 3,200 men under Gen. Stricker to oppose the advance of the enemy, whose commander, Gen. Ross, was killed in a preliminary skirmish. The battle lasted four hours and the British retained possession of the field.
- North Sea.**—That portion of the Atlantic Ocean which lies between the British Isles and the Continent. Its navigation is extremely perilous on account of sand-banks and fog.
- Northumberland.**—The most northerly county of England.
- Northwestern Boundary.**—The northern boundary of the U. S., from the Rocky Mountains to the Pacific Ocean. For many years the rich territory west of the Rockies lying between latitude 42° and 54° 40' was in dispute, all or parts of it being claimed by Russia, Spain, Great Britain, and the U. S. In 1819 the Spanish claims were withdrawn, and in 1825 Russia agreed to make no settlement south of 54° 40'. Though a treaty in 1818 opened the entire country to the joint occupation of British and Americans, the people of both nations were jealous and sensitive upon the subject. In the presidential election of 1844 the subject was made a political issue, giving rise to the campaign war cry, "Fifty-four forty or fight!" The matter was finally adjusted in 1846, under the administration of President Polk, by an agreement upon latitude 49° as the northern boundary from the Rockies to the channel between Vancouver Island and the mainland, thus continuing the straight boundary that already extended from Lake Winnipeg as far as the Rockies.
- Northwest Territory.**—Under this name was included the country which now forms the states, Ohio, Indiana, Illinois, Wisconsin, and Michigan. The thirteen original states each claimed this territory but eventually their claims were relinquished.
- Norton, Charles Eliot.**—Born, 1827. A noted American author; professor of the history of art at Harvard University.
- Norton, Mrs. (HON. CAROLINE ELIZABETH SARAH).**—(1808-1877.) An English poet and novelist. She was the granddaughter of Richard Brinsley Sheridan.
- Norwalk.**—(1) A township in Fairfield Co., Conn.; has manufacturing interests. Pop. (1900), 19,932. (2) The capital of Huron Co., Ohio. Pop. (1900), 7,074.
- Norway.**—A kingdom of northwestern Europe, and forming the western part of the large Scandinavian Peninsula that lies between the Atlantic and Arctic oceans on the west and the Baltic Sea on the east. In government, as in physical feature, it is united with Sweden, the two being under the same sovereign and having the same diplomatic relations, though in other respects they are independent. The chief industries are fisheries and lumber, and the mining of silver, copper, iron, and nickel. The country is mountainous, and large fjords indent the coast. The state church is Lutheran. Area, 124,445 sq. miles; pop., about 2,000,000.
- Norway Maple, The.**—2811.
- Norwich.**—(1) One of the capitals of New London Co., Conn. Paper, cotton, wool, and metal manufactures. Pop. (1900), 24,637. (2) The capital of Chenango Co., N. Y., on the Chenango River. Pop. (1900), 5,766.
- Norwich.**—(1) The capital of Norfolk, England; engaged largely in manufacturing. Pop. (1891), about 100,000. (2) A city of Connecticut; an important trade and manufacturing center. Pop. (1900), 17,251.
- Notch, Crawford.**—A deep and narrow valley of the White Mountains, N. H.
- Notre Dame.**—One of the world's most famous cathedrals. It is situated at Paris; was begun in 1163.
- Nott, Eliphalet.**—(1773-1866.) A noted American educator.
- Nottingham.**—An important city of England and the capital of the county of the same name. It is most noted for lace and hosiery manufacture. Pop., 239,753.
- Novanglus.**—A pseudonym used by John Adams (1774-75), in a political newspaper controversy with a Tory antagonist. (See ADAMS, JOHN, 5.)
- Nova Scotia.**—A province of the Dominion of Canada, on the extreme southeast of Canada; is peninsular in form, being connected with the province of New Brunswick by the Isthmus of Chignecto and separated from it by the Bay of Fundy. The large island of Cape Breton belongs to this province. The capital is Halifax. The area is 20,550 sq. miles and the population 450,523.
- Novel, The.**—3172.
- November** (Latin, *novem*, nine).—In ancient times it was the ninth month; but became the eleventh, as now, upon the addition in 713 B.C., of January and February.
- Nubia.**—A division of eastern Africa, in the district of the Sudan. The chief town in Dongola. On the revolt of the Mahdi in 1882 it passed out of the hands of the Egyptians and is now under British control.
- Nullification.**—Ordinarily defined as invalidating or making void; this has in American politics exclusive reference to the political doctrine enunciated originally by John C. Calhoun, of S. C., in his controversy with the general government (1828-33). Calhoun argued that an individual state had the power to declare unconstitutional a law of the U. S., even when the latter had been passed in the regular and proper manner

and declared constitutional by the Supreme Court. He took the stand that an attempt to execute such a law in a state that denied its validity would warrant that state in seceding from the Union. The proximate cause of this statement of a principle that threatened the dissolution of the Union, was the claim that the tariff law bore with undue severity on the non-manufacturing and raw-material producing South. The Nullifiers drew their arguments and their inspiration from the teachings of Jefferson and Madison, in the Ky. and Va. resolutions passed in 1798-99, in reference to the alien and sedition laws. These resolutions held that the general government was not "the final or exclusive judge of the powers delegated to itself but that, as in all other cases of compact among powers having no common judge, each party has an equal right to judge for itself, as well of infractions as of the mode and measure of redress." Next to Calhoun, Senator Hayne, of S. C., was the chief advocate of this doctrine in Congress. It was in reply to Hayne that Webster made the speech that is regarded as his masterpiece. The logical outcome of the contention of Calhoun and Hayne was the ordinance of nullification, passed by S. C., Nov. 19, 1832. The ordinance proclaimed the Federal tariff law "null and void," authorized citizens to refuse payment of the duties imposed, and disputed the right of the U. S. Supreme Court to pass upon the constitutionality of the ordinance itself. The legislature was about to pass a bill to give effect to the ordinance, when the enactment of the Clay Compromise tariff of 1833 averted this extreme measure. President Jackson met the attempt to thwart the enforcement of the Federal laws by prompt and significant orders to the revenue officers at Charleston, and by a proclamation and a special message to Congress. The tariff bill that allayed the excitement and gave partial and temporary satisfaction to the Nullifiers was passed Mar. 3, 1833, and less than two weeks later a convention in S. C. repealed the ordinance of nullification.

Nutmeg, The Cultivation of the.—In the West Indies, and in British Guiana, the nutmeg is produced in large quantities. The nutmeg tree grows from

twenty to thirty feet high, and bears during a period of seventy or eighty years. It has the appearance of a pear tree. Its smooth bark is gray in tone and its trunk abounds in yellow sap. Its oblong leaf is from five to six inches in length, terminating in a sharp apex; the upper surface is dark green and the under part a shining white. Some centuries ago the nutmeg was grown on ten islands of the Banda group. In later years, however, the production was restricted, by the Dutch who owned the islands, to four islands.

The fruit of the nutmeg tree is pear-shaped and about the size of a peach. At maturity, it opens into halves. The interior contains the seed and its appendages, and the outer portion has a thick covering of a brown color. The maximum product of the tree is attained, from seed, in fifteen years. There are three periods of harvesting: during July and August, when the fruit is more abundant; in November, when the nuts are smaller; and during March and early April. In the last-mentioned season the product is dry, and not abundant. Five pounds of nutmegs are frequently gathered in a single picking from one tree. The fruit is gathered by means of a barb at the end of a long pole. The outer husk is then removed, and the mace is carefully separated by the aid of a knife. The drying of the product is accomplished by exposure to the sun's rays or by artificial heat. Salt water is sprayed over the nutmegs as soon as the golden-brown color makes its appearance; the application of water is a curing process which aids in their preservation. Drying nutmegs by artificial heat, which is done in wet weather, is effected by placing them over a slow fire, in a heat of one hundred and forty degrees. About two months afterward the nut has shrunk and rattles freely in the shell, which is then broken with a mallet or by machinery. The nutmeg proper then appears; it is olive shaped, one inch long, and has distinctly marked furrows. Nuts which have previously been dipped in milk of lime show traces of white in these furrows.

Nye, Edgar Wilson.—(1850-1896.) A journalist and humorist, known as "Bill Nye."

O

Oak, The.—2863.

Oakes, James.—(1325-.) An American soldier who served with distinction through the Mexican War.

Oakland.—The capital of Alameda Co., Cal. Pop. (1900), 66,960.

Oaks, The.—A horse-race run annually at Epsom, England, for three-year-old fillies. It takes place on the Friday following Derby Day—last Wednesday of May. Distance 1½ miles.

Oates Plot.—Devised by Titus Oates, an English impostor. In 1678 he submitted to Charles II. and afterward to Parliament; forged documents

of a conspiracy formed by Don John of Austria and Pere la Chaise, Louis XIV.'s confessor, for the murder of Charles II. and the establishment of Roman Catholicism in England. A number of persons were executed on his evidence and he was granted a pension.

Oath.—In general, an oath is a solemn appeal to the Supreme Being in attestation of the truth of some statement or the binding character of some covenant or promise. In law, an oath is a solemn declaration requisite to entering upon the duties of some office more or less public, or to giving evidence in a court of justice. The

Constitution requires that before the President shall enter on the execution of his office, he shall take the following oath or affirmation: "I do solemnly swear (or affirm) that I will faithfully execute the office of President of the U. S., and will to the best of my ability preserve, protect, and defend the Constitution of the U. S." The first act of Congress provided for oaths of office. All officers of the executive, legislative, and judicial departments of the states and the nation are required to take an oath similar to the foregoing. In June, 1778, Congress directed Washington to administer to the officers of the army, before leaving Valley Forge, an oath declaring the U. S. free and independent, renouncing allegiance to George III., king of Great Britain, and promising to defend the U. S. against him. By act of Congress, Aug. 3, 1861, the oath of allegiance for the cadets at West Point was amended so as to abjure all allegiance, sovereignty, or fealty to any state, county, or country whatsoever, and to promise unqualified support of the Constitution and the National Government. In 1865 oaths of allegiance were required as a condition of pardon of persons who had participated in the rebellion. The oath required of persons appointed to office from the Southern States, declaring that they had in no way aided or abetted the rebellion, was called the "ironclad oath," and was modified as soon as all apprehension of further difficulty with the South had passed away. Following is substantially the oath administered to jurors entering upon their duties: "You shall well and truly try the issue between the parties and a true verdict give according to the evidence, so help you God." The juror sometimes kisses the New Testament. Witnesses must be sworn in with the words: "The evidence you shall give shall be the truth, the whole truth, and nothing but the truth, so help you God!" Witnesses must understand the nature of an oath, and on this ground young children are excluded as witnesses. According to statutes of Congress, any person having conscientious scruples against oaths may make a solemn affirmation. Jews are sworn on the Pentateuch, keep on their hats, and conclude their oaths with the words, "So help me Jehovah." A Mohammedan is sworn on the Koran. In China, an oath is taken by breaking a dish on the witness box or beheading a fowl. The form of taking an oath is immaterial, the essential thing being that the witness acknowledges some binding effect derived from his sense of obligation to tell the truth. (See PERJURY.)

Obedience.—824.

Obelisk.—Derived from the Greek *ὀβελός*, signifying a spit. Applied to prismatic monuments of stone terminating in a pointed top.

OBELISK OF LUXOR; in the Place de la Concorde, Paris; brought from Egypt under Louis Philippe.

OBELISK OF THE LATERAN; in Rome, brought from Heliopolis by Constantius.

OBELISK OF THEODOSIUS; in the Hippodrome at Constantinople, brought from Heliopolis and erected 390 A.D.

OBELISK OF THE VATICAN; at St. Peter's, Rome, brought from Heliopolis by Caligula.

Ober-Ammergau.—A village in upper Bavaria, noted for the miracle-play acted there every ten years.

Oberlin.—A village in Lorain Co., Ohio, the seat of Oberlin College. Pop. (1900), 4,082.

Oberon.—In Shakespeare's "Midsummer's Night's Dream," the King of the Fairies; husband of Titania.

Obi.—The chief river of Siberia, formed by the union of the Biga and Katun, and flowing into the Gulf of Obi. Length, 2,600 miles.

Obion River.—A river of western Tenn. Length, about 135 miles.

O'Brien, Fitz-James.—(1828-1862.) An Irish-American writer of stories.

O'Brien, William Smith.—(1803-1864.) An Irish Revolutionist and member of Parliament.

Observation.—780.

Obstacles, Overcoming.—4428.

Ocala Platform.—The National Farmers' Alliance, in convention at Ocala, Fla., Dec. 8, 1890, adopted a platform favoring the establishment of subtreasuries to lend money to the people at 2 per cent. interest, the unlimited coinage of silver, etc.

O'Callaghan, Edmund Bailey.—(1797-1880.) An Irish-American historian.

Occupation, My First.—4799.

Occupations (Kindergarten), The.—3682.

Perforating or Pricking, 3683.

Sewing, 3685.

Drawing, 3687.

Coloring and Painting, 3690.

Paper-interlacing, 3692.

Weaving, 3693.

Paper Folding, 3698.

Paper-cutting and Paper-mounting, Silhouetting, 3705.

Pea-work, 3707.

Cardboard Modeling, 3708.

Modeling in Clay, 3710.

Occupations for Women.—4030.

Physicians, 4033.

Professional Nurses,

4038.

Architects, 4043.

Lawyers, 4047.

The Newspaper

Office, 4050.

Stenographer, 4057.

Government Em-

ploy, 4062.

The Stage, 4067.

Private Secretaries, 4069.

Office Copying, 4071.

Copyists for Literary People, 4073.

School Teaching, 4075.

Nursery Governess, 4077.

Kindergarten Teaching, 4079.

Music Teaching, 4081.

Women as Inventors, 4086.

Dentistry, 4089.



- Telegraphy, 4091.
 Writing of Advertisements, 4095.
 Advertising, 4098.
 Photographers, 4100.
 Proof-reading, 4103.
 Typesetting, 4104.
 Piano Tuning, 4106.
 Librarians, 4108.
 Illustrating, 4112.
 Designing, 4113-16.
 Miniature Painters, 4118.
 Crayon Portraiture, 4119.
 China Painting, 2382, 4121.
 Saleswoman, 4122.
 Buyers, 4123.
 Shop Clerks, 4125.
 Window Dressers, 4128.
 Laundry, 4129.
 Plain and Fancy Sewing, 4130.
 Milliners, 4132.
 Keeping Lodgers, 4134.
 Care of the Hair, 4135.
 Coöperation with Butchers and Green-grocers, 4136.
 Flowers, 4138.
 Professional Shopping, 4141.
 Chemistry, 4143.
 Artificial Flower Making, 4144.
- Ocean Grove.**—A town and seaside in Monmouth Co., N. J.
- Oceania, or Oceanica.**—The fifth division of the globe, comprising all the islands situated between the southeast coast of Asia and the west coast of America.
- Oceans.**—The body of water that covers about $\frac{3}{4}$ of the surface of the earth is arbitrarily divided into oceans, the chief of which are five in number.
1. **ANTARCTIC.**—That part of the ocean that lies south of the Antarctic circle. It is largely unexplored. It includes some land but no traces of animal or vegetable life have been discovered.
 2. **ARCTIC.**—That part of the ocean that lies about the north pole. It has been largely explored by expeditions that have endeavored to reach the north pole. This ocean is practically bounded by the northern shores of Europe, Asia, and North America. Its largest body of land, so far as is known, is Greenland.
 3. **ATLANTIC.**—That part of the ocean that lies between Europe and Africa on the east, and North and South America on the west, and is bounded by the Arctic and Antarctic oceans on the north and south. Its length is about 10,000 m., its width about 3,000 m., and it is a highway of commerce. A prominent physical feature is the current known as the Gulf Stream.
 4. **INDIAN.**—That part of the ocean that lies south of Asia. It is bounded on the west by Africa, and on the east by Australia and the Malay Archipelago. It contains the important islands of Madagascar and Ceylon, and receives the drainage of the Zambesi in Africa, and of the Indus, Ganges, Tigris and Euphrates in Asia.
 5. **PACIFIC.**—The largest of all the oceans, being that part of the ocean that lies between North and South America on the east, and Asia and Australia on the west. It adjoins the Antarctic Ocean on the south and connects by Bering Strait with the Arctic. The most important islands are the Hawaiian, which lie approximately midway between the two continents.
- Ocelot, The.**—2460.
- Ochrida, Lake of.**—In Albania, Turkey; length, about 18 miles.
- Oconee.**—A river of central Ga. Length, about 250 miles.
- O'Connor, Thomas Power.**—(1840-.) Irish politician and journalist.
- O'Conor, Charles.**—(1804-1884.) A noted American lawyer; prosecuting lawyer in the famous "Tweed Ring" cases.
- Ocracoke Inlet.**—A sea passage in N. C., connecting Pamlico Sound with the Atlantic.
- Octavia.**—(70 B.C.-11 B.C.) The wife of Mark Antony, and sister of the Roman Emperor Augustus.
- Octavius, Caius.**—(63 B.C.-14 A.D.) The first Roman emperor. The birth of Christ occurred during his reign.
- October.**—The tenth month of the year; has 31 days. It was the eighth month of the so-called year of Romulus, but became the tenth when Numa changed the commencement of the year to the first of January.
- October States.**—Those states which until recent times held their elections in October instead of November. All are now held in November.
- Octopus, The.**—See MOLLUSK, 2715.
- Odenburg.**—Capital of the county of Odenburg, Hungary. It is a royal free city.
- Oder.**—One of the principal rivers in Germany; rises in Moravia and forms part of the dividing line between Austria and Prussian Silesia. Length, 500 miles.
- Odessa.**—An important commercial city and seaport of south Russia, in the Government of Kherson. Pop., about 300,000.
- Odul** (Norse Mythology).—1639.
- Odyssey, The Story of.**—1725.
- Œdipus.**—A prominent character in Greek epic poetry and mythology; king of Thebes.
- Offa's Dyke.**—A intrenchment built by Offa, king of Mercia, between England and Wales, as a defense against the Welsh. It extends from a point near the mouth of the Wye to the mouth of the Dee.
- Offenbach.**—A city situated on the Main four miles east of Frankfurt, in the province of Starkenburg, Hesse.
- Offenbach, Jacques.**—(1819-1880.) French composer of opera bouffe.
- Offensive Partisanship.**—A popular phrase first used by Pres. Cleveland in a message to congress. (See CLEVELAND, GROVER, 126.)
- Office-holder, Merit in an.**—5073.
- Ogden.**—The capital of Weber Co., Utah; an important railroad junction.

- Ogden, William Butler.**—(1805-1877.) An American merchant and railroad president; prominent in developing the northwest. He was first mayor of Chicago in 1837.
- Ogdensburg.**—A city in St. Lawrence Co., N. Y.; important trade and manufacturing interests. Pop. (1900), 12,633.
- Ogdensburg (N. Y.), Capture of.**—Ogdensburg lies in northern N. Y., on the right bank of the St. Lawrence River. Feb. 22, 1813, 800 British soldiers under Lieut.-col. McDonnell, crossed upon the ice from Canada, captured and sacked the town which had been garrisoned by 1,200 Americans under Maj. Forsyth.
- Ogeechee.**—A river in southeastern Ga., flowing into the Atlantic Ocean near Savannah. Length, about 200 miles.
- Oglesby, Richard James.**—(1824-1899.) A politician and soldier; general in the Civil War.
- Oglethorpe, James Edward.**—(1696-1785.) An English general and philanthropist.
- Ohio.**—One of the North Central States of the U. S. of America, lying south of Lake Erie. It was a part of the Northwest Territory organized in 1797. Admitted to the Union in 1803. Rich in agriculture, coal, and manufactures, it ranks first in the Union in the production of wool and of agricultural machinery. Its capital is Columbus. Area, 41,060 sq. miles. Its pop. (1900) is 4,157,545, giving it the fourth place in the Union. Popularly called the Buckeye State.
- Ohio, Army of the.**—Successively two grand divisions of the U. S. army during the Civil War were known by this name. The first was organized in 1861 and was commanded by Gen. Buell; in 1862 it was called the Army of the Cumberland. The second was organized in 1863 to operate against Knoxville. It served in the Atlanta campaign and continued in operation to the close of the war.
- Ohio, Army of the.**—See BUELL, DON CARLOS, 92.
- Ohio Company, The.**—A company of colonists from Va. and Md. that received from the British Government, in 1749, 500,000 acres in the Ohio valley for the purpose of settlement.
- Ohio Idea, The.**—A political plan advocating the use of greenbacks in place of national-bank notes, and for the payment of U. S. bonds. The plan was urged especially in Ohio.
- Ohio River.**—Formed by the junction of the Monongahela and Allegheny rivers at Pittsburg; flows through western Pennsylvania and empties into the Mississippi. Navigable its entire length, 975 miles.
- Ohnet, Georges.**—(1792-1872.) French novelist and dramatist.
- Oil City.**—A city of northwestern Pa., noted for its oil industry. Pop. (1900), 13,264.
- Oil Color Painting.**—See HOME STUDY OF ART, 2378.
- Oise.**—A river 187 miles long in northern France, which joins the Siene 15 miles northwest of Paris.
- Ojibwa, or Chippewa, Indians.**—A large tribe of American Indians of Algonquin stock, now numbering over 30,000, divided about equally between the U. S. and Canada. Their original hunting range extended over both shores of Lakes Huron and Superior, and across northern Minn. into the mountain region of Dak. Being very powerful they carried on many wars and wandered far and wide, but by 1851 they had been crowded west of the Mississippi.
- Okeechobee Lake.**—A lake in southern Fla. Length, about 40 miles.
- Okefinokee Swamp.**—A large swamp in southeastern Ga. and the adjoining part of northern Fla.
- Oklahoma.**—A territory of the United States bounded by Kansas and Colorado on the north, Indian Territory on the east, Texas on the south, and New Mexico on the west. Area, 39,030 sq. miles; pop., about 200,000.
- Oklahoma City.**—A town in the eastern part of Oklahoma, on the North Fork of the Canadian River. Pop. (1900), 10,037.
- Olaf.**—The first Christian king of Sweden, called the Lap-king. Reigned 993-1024.
- Olaf, Saint.**—King of Norway, who consolidated the kingdom and introduced Christianity. Reigned 1015-28.
- Olaf Trygvesson, or Trygvasson.**—(956-1000.) King of Norway about 996-1000. He was killed in naval battle by the kings of Sweden and Denmark.
- "Old Abe"; "Honest Old Abe."**—Popular sobriquets applied to Abraham Lincoln.
- "Old Baldy."**—An army name for Gen. William F. Smith.
- Oldcastle, Sir John.**—Born in Hertfordshire, England; burned at London, 1417. An English nobleman who was a successful general in the French War.
- Old Colony, The.**—That territory of eastern Massachusetts which was occupied by the Plymouth Colony.
- Old Dominion.**—A popular name for the state of Va., having its origin in such phrases as "His Majesty's dominion of Virginia," and "the colony and dominion of Virginia," which frequently occurred in colonial documents.
- Oldenburg.**—A grand duchy of northern Germany and a state of the German empire; an agricultural district. Area, 2,479 sq. miles.
- Oldest Book, The.**—The oldest book in the world is a papyrus containing the proverbs of Ptahhotep, an Egyptian king, who reigned some 3000 B.C. which was before the birth of Abraham. It has been in part translated by Cabas, and others, and may be seen in English dress in J. D. Heath's "Record of the Patriarchal Age."
- Oldfield, Anne.**—(1683-1730.) A famous English actress.
- Old Hundredth, or Old Hundred.**—A popular psalm-tune, first published in the "Genevan Psalter" 1551-52.
- "Old Ironsides."**—The popular name of the U. S. frigate "Constitution."
- "Old Jack."**—A familiar name given to Gen. Thomas J. ("Stonewall") Jackson by his soldiers.
- "Old Man Eloquent."**—John Quincy Adams was so called in recognition of his long and distinguished public services. (See ADAMS, JOHN QUINCY, 9.)

- Old North State.**—A name sometimes given to the state of North Carolina.
- Old Orchard Beach.**—A seaside resort in Me.
- "Old Pap."**—A name affectionately given to Gen. George H. Thomas by his soldiers.
- Old Point Comfort.**—A fashionable watering place of Va. situated at the mouth of the James River.
- Old Probabilities.**—A nickname for the chief signal-officer of the Signal Service Bureau.
- "Old Put."**—A nickname of Gen. Israel Putnam.
- "Old Reliable."**—A nickname of Gen. George H. Thomas.
- "Old Rosey."**—Gen. William S. Rosecrans was so called in the army during the Civil War.
- "Old Rough and Ready."**—A sobriquet applied to Gen. Zachary Taylor by his soldiers during the Mexican War, and during the political campaign of 1848.
- "Old Slow-trot."**—A sobriquet bestowed upon Gen. George H. Thomas, because of a characteristic manner of riding.
- Old South Church.**—In Boston, on the corner of Milk and Washington streets. Built in 1729, it was the scene of many stirring meetings in Revolutionary days. It is now used as a museum of relics.
- Old Style.**—Under Pope Gregory, the calendar was altered in order to rectify certain errors; in the new calendar, 10 days were omitted, and Oct. 5, 1582, became Oct. 15. The new style was adopted by most of the leading European countries within a few years following; Great Britain, however, not making the change until 1752. Russia, Greece, and some of the Eastern countries, retain the old style.
- "Old Tecump."**—A sobriquet by which Gen. William Tecumseh Sherman was familiarly known to his soldiers.
- Old Testament in Arabic Legends, 1411.**
Introduction, 1413.
Adam, 1415.
Enoch or Idris, 1428.
Noah, Hud, and Salih, 1430.
Abraham, 1437.
Joseph, 1450.
Moses and Aaron, 1457.
Samuel, Saul, and David, 1483.
Solomon and the Queen of Saba, 1496.
- "Old Tippecanoe."**—A popular sobriquet for Gen. William Henry Harrison, given to him after his victory over the Indians at the battle of Tippecanoe, Nov. 6, 1811.
- Old Virginia.**—The original state of Virginia which was divided during the Civil War. The term is sometimes used also to distinguish Virginia proper from West Virginia.
- Ole Bull.**—(1810-1880.) A Norwegian violinist and composer.
- Oliphant, Laurence.**—(1829-1888.) An English writer, traveler, and diplomatist.
- Oliphant, Mrs. (MARGARET OLIPHANT WILSON).**—(1828-1897.) British novelist and biographical writer.
- Oliver, Andrew.**—(1706-1774.) A politician. He was stamp distributor in Boston in 1765, and later lieut.-gov. of Mass.
- Oliver, Isaac.**—3466.
- Olives, Mount of.**—A ridge of hills situated east of Jerusalem, often mentioned in the New Testament. Highest point, 2,672 feet.
- Olmstead, Frederick Law.**—(1822-.) A noted American landscape gardener.
- Olmstead et al. vs. Rittenhouse's Executrixes.**—In 1779, Olmstead and other Conn. men were impressed as sailors into the service of the British sloop "Active." They mutinied and gained possession of the vessel. Later they were captured by the Pa. brig. "Convention." The Pa. court of admiralty adjudged the "Active" a lawful prize and divided up the prize money, giving one-fourth to Olmstead and the others. They in turn claimed the whole amount. After much litigation, the U. S. Supreme Court, in 1809, executed judgment in favor of the plaintiffs. The opposition on the part of Pa. was so violent that the decree was not carried out.
- Olmütz.**—The third city of Moravia, and one of the chief fortresses of the Austrian empire.
- Olney.**—A town in Buckinghamshire, England; the home of Cowper, the poet.
- Olney, Richard.**—Born at Oxford, Mass., 1835. An American lawyer and statesman; appointed attorney-general in 1893; Secretary of State in 1895, on the death of Walter Q. Gresham.
- Olonetz.**—A government in northwestern Russia. Capital Petrozavodsk. Area, 57,439 sq. miles.
- Olustee (Fla.), Battle of.**—A Federal force of about 5,000 under Gen. Seymour was surprised by the Confederates Feb. 20, 1864, and routed, with a loss of nearly 2,000. The remaining troops returned to Port Royal, S. C., from whence the expedition had started.
- Olympia.**—In ancient geography, a valley in Elis, Peloponnesus, Greece. It is famous as the seat of the Temple of Zeus and of the Olympic games.
- "Olympia."**—An armored cruiser of 5,780 tons displacement, launched in 1892. She was the flagship of the Asiatic squadron during the Spanish-American War and the warfare in the Philippines. (See 161.)
- Olympia.**—The capital of the state of Washington. Pop. (1900), 4,082.
- Olympias.**—The wife of Philip II. of Macedon, and mother of Alexander the Great. Put to death 316 B.C.
- Olympic Games, The.**—They were the greatest of the four Panhellenic festivals of the ancient Greeks and served as a division of time into Olympiads. They were celebrated at intervals of four years.
- Olynthiac Orations.**—Three orations delivered by Demosthenes at Athens for the purpose of inducing the Athenians to assist Olynthus against Philip II. of Macedon.
- Omaha.**—The capital of Douglas Co., Neb., and the largest city in the state; an important commercial and railway center. Pop. (1900), 102,555.
- Omaha Indians.**—A tribe of the Sioux stock of North American Indians, formerly dwelling near Council Bluffs, Iowa, but now occupying the reservation in northeastern Nebraska. They number less than 1,200.

- Omar Khayyam** (*ô'mär khÿ-yam'*).—(11th and 12th centuries.) A celebrated Persian astronomer and poet. His works have been translated by Fitzgerald and others.
- Omar, Mosque of, or Kubbet es-Sakhra.**—A famous mosque on the platform of the temple in Jerusalem.
- Omdurman.**—A city in the Sudan situated on the Nile opposite Khartum. Here, in 1898, the dervishes were defeated by the British and Egyptian troops under Sir Herbert Kitchener.
- Omnibus Bill.**—A series of bills passed by Congress, in 1850, framed upon resolutions introduced by Henry Clay as a compromise upon the slavery question. The chief provisions were the admission of Cal. as a free state, the abolition of the slave trade in D. C. and a stringent fugitive slave law.
- Omsk.**—The capital of a general government of west Siberia; situated in the province of Akmolinsk.
- Onega, Lake.**—Situated in the government of Olonetz, northwestern Russia; the second largest lake in Europe. Area, 3,763 sq. miles.
- Oneida Community.**—A religious brotherhood, founded in 1847 on Oneida Creek, N. Y. It was originally communistic but in 1879 family life was restored and in 1880 it was organized as a joint stock company.
- Oneida Indians.**—A tribe of the Iroquois stock of North American Indians, formerly occupying the region east of Oneida Lake, N. Y. They now number about 3,000, and most of them are on the reservation at Green Bay, Wis.
- Oneida Lake.**—A lake in central N. Y., having outlet into Lake Ontario.
- O'Neill, Eliza.**—(1791-1872.) A noted Irish tragic actress.
- Onondaga Indians.**—A small tribe of the Iroquois stock of the North American Indians, now numbering about 900 and dwelling near the creek and lake in N. Y. state which bear their name.
- Onondaga Lake.**—A small lake in central N. Y.; its outlet is Seneca River.
- Ontario.**—A province of the Dominion of Canada; Capital, Toronto. Chief industries, fruit and grain raising, mining, and manufacturing. Area, 219,650 sq. miles. Pop. (1901), 2,182,942.
- Ontario, Lake.**—The smallest of the five great lakes. It lies between Ontario and New York state, connected with Lake Erie by the Niagara River. Length, 190 miles; width, 55 miles.
- "On to Richmond."**—A phrase which will always be remembered in connection with the Civil War. It was an expression of the popular impatience at the North for the army grouped about Washington to advance on the Confederate capital. (See GEORGE G. MEADE.)
- Opelousas.**—The capital of St. Landry Parish, La. Pop. (1900), 2,981.
- Ophir.**—In ancient geography, a country famous for its gold, silver, precious stones, sandalwood, etc.; it has been variously identified with India, Sumatra, and other places in the Far East.
- Ophir, Mount.**—A volcano near the western coast of Sumatra. Height, 9,610 feet.
- Opie, John.**—(1761-1807.) A noted English painter.
- Opium.**—The dried juice of the unripe capsule of the common or white poppy (*Papaver somniferum*). It is one of the most valuable of medicines. The common poppy is a native of the warm regions of Asia and in British India its cultivation forms an extensive branch of agriculture.
- Opium War.**—War between China and Great Britain, due to the Chinese Government's attempts to prevent the importation of opium. Began 1840, ended 1842.
- Oporto.**—One of the chief cities of Portugal; capital of the province Entre Douro e Minho.
- Opossum, The.**—2444.
- Opportunities, Seeing and Seizing.**—4273.
- Optic, Oliver.**—The pen name of William Taylor Adams.
- Option.**—Permission to choose.
- Orange.**—A city in Essex Co., N. J. Pop. (1900), 24,141.
- Orange, The.**—2876.
- Orange Free State.**—A British colony in southern Africa. Capital, Bloemfontein. Area, 52,000; pop., over 200,000.
- Orang-outang, The.**—See MONKEY, 2452.
- Orator of the Platte.**—A popular sobriquet for William Jennings Bryan, of Nebraska.
- Oratory.**—3110.
- Oratory as a Means of Culture and as a Profession.**—5017.
- Orchard, Largest in the World.**—The largest orchard in the world is in Barbara, California, U. S. A., and belongs to Elwood Cooper. It extends to 1,700 acres, and contains 10,000 olive trees, 3,000 English walnut trees, 4,500 Japanese persimmon trees, 10,000 almond trees, and about 4,000 other fruit and nut trees. This orchard is said to bring the owner an income of not less than \$750 per acre. There are many fine orchards in Jersey and Guernsey; in the former island is an orchard said to contain 60,000 pear trees.
- Orchard Knob (Tenn.).**—A knoll lying in front of Chattanooga. Generals Grant and Thomas watched the progress of the battle from this point Nov. 23-25, 1863.
- Orchis, The.**—2904.
- Ord, Edward Otho Cresap.**—(1818-1883.) An American soldier; appointed maj.-gen. of volunteers in 1862, and succeeded Gen. Butler in the command of the Army of the James, 1864.
- Order of the American Union.**—A secret political party that had a brief existence from the time of its organization about 1870. Its purpose was to prevent persons of foreign birth, especially Roman Catholics, from acquiring political power.
- Orders in Council.**—Generally speaking, such orders of the British sovereign as are advised by the privy council. Specifically, those orders which in 1807 prohibited direct trade with France or her allies, and which directed the seizure of neutral ships engaged in such trade. The result of these orders bore heavily upon the commerce of the U. S.
- Ordinance Office.**—In the United States, this department has charge of the arsenals and armories

- and furnishes all military supplies. The office is under the direction of a chief of ordnance, who receives a salary of \$5,500 per year.
- Oregon.**—One of the Northwestern Pacific States of the U. S. of America, lying between Wash. on the north and Cal. on the south. It is traversed by the Cascade and other mountain ranges. Its chief products are lumber, wheat, salmon, wool, and fruit. Admitted to the Union in 1859. Capital, Salem; principal city and port, Portland. Area, 96,030 sq. miles; pop. (1900), 413,536. Called the Webfoot State.
- "Oregon."**—A battleship launched in 1893. She is of 10,288 tons displacement, and on her trial trip maintained for four hours a speed of 16.79 knots. She took part in the battle off Santiago, July 3, 1898, and with the "Brooklyn" forced the surrender of the "Cristobal Colon." She left New York for the Philippines, Oct. 12, and joined the Asiatic squadron at Manila in March, 1899.
- O'Reilly, John Boyle.**—Born at Dowth Castle, County Meath, Ireland, 1844; died at Huil, Mass., 1890. An Irish-American journalist and poet.
- Orestes.**—In Greek mythology the son of Agamemnon and Clytemnestra; brother of Electra.
- Organ, Largest in the World.**—The largest organ in the world is at the Town Hall of Sydney, New South Wales, which took three years to build, and cost £15,000. The next largest is in Seville Cathedral, followed by one built at the expense of Mrs. A. T. Stewart, as a memorial to her husband, in the Cathedral of the Incarnation at Garden City, N. Y. It is divided into four distinct parts in widely separated localities of the cathedral—but under the control of one organist, and is worked by electricity.
- Organized Motherhood.**—999.
- Original Package.**—The U. S. Supreme Court, in 1890, deciding a case that involved the enforcement of the Prohibition law in Iowa, held that manufacturers or merchants had the right to carry liquors into any state and sell them in the original package without reference to local prohibitory or restrictive laws. Congress immediately passed a law giving states control of liquors so imported even though in the original package.
- Orinoco.**—The most northern of the three great rivers of South America. Length, about 1,350 miles.
- Orion.**—A giant hunter, of Greek mythology. After being slain by Artemis he was changed into a constellation. 1611.
- Orion.**—See CONSTELLATIONS, 3000.
- Oriskany (N.Y.), Battle of.**—A short but fierce battle of the Revolution, fought Aug. 6, 1777, near Fort Stanwix (now Schuylers), not far from the present site of Rome. The Americans under Herkimer were ambushed by a detachment of Burgoyne's army, consisting of British, Canadians, and Indians, under St. Leger. The army of St. Leger was utterly routed and fled in confusion to Canada, deserted by their Indian allies.
- Orkney, or Shetland Islands.**—A group of islands off the north coast of Scotland from which they are separated by Pentland Firth. They are 67 in number, 29 being inhabited. Area 376 sq. miles; pop., over 30,000.
- Orléans.**—In France; the capital of the department of Loiret. It has important commercial and manufacturing interests, and has been the scene of a number of battles.
- Orléans, Maid of.**—See JOAN OF ARC.
- Orleans, Territory of.**—The former name given to the present state of Louisiana. The original territory was laid out in 1804, shortly after the Louisiana purchase. In 1810 it was enlarged by the addition of what was called West Florida. The territory as thus augmented was, Apr. 12, 1812, admitted to the Union under the name of Louisiana.
- Orloff Diamond, The.**—The chief jewel in the Russian scepter; weight 193 carats. Presented to Catherine II. by Count Grigori Orloff.
- Orpheus, C. Kerr.**—A paraphrase of "office seeker," pseudonym of Robert H. Newell. (See NEWELL, ROBERT H.)
- Orr, James Lawrence.**—(1822-1873.) An American politician; member of Congress from S. C. (1849-59); speaker of the House (1857-59); Confederate senator (1862-65); governor of S. C. (1865-68); and U. S. minister to Russia (1873).
- Osage.**—A river of Kansas and Missouri, flowing into the Mississippi river. Length, about 500 miles.
- Osage Indians.**—A tribe of Sioux stock; divided into two classes: the Great or Highland Osages and the Little or Lowland Osages. Having ceded all of their land to the government, they now occupy a reservation in Oklahoma; they number about 1,600.
- Osage Orange, The.**—2876.
- Osborn vs. United States Bank.**—This case involved the question whether a state has the right to tax the U. S. Osborn, auditor of the state of Ohio, seized \$100,000 from the U. S. bank at Chillicothe in payment of state taxes on banks. The opinion of the Supreme Court, which was delivered by Chief-justice Marshall, ordered the restitution of the money, though without interest.
- Osceola.**—(1804-1838.) A Seminole chief, leader during the first part of the second Seminole War (1835-37).
- Osgood, Samuel.**—(1748-1813.) An American politician; first commissioner of the U. S. Treasury (1785-89) and postmaster-general (1789-91).
- Oshkosh.**—The capital of Winnebago Co., Wis.; manufactures builders' materials—doors, blinds, etc. Pop. (1900), 28,284.
- Osiris, The God-Man.**—See EGYPTIAN MYTHOLOGY, 1590.
- Oskaloosa.**—The capital of Mahaska Co., Iowa. Pop. (1900), 9,212.
- Osman I., or Othman.**—Died, 1326. Founder of the Ottoman Empire.
- Osman II.**—Sultan of Turkey (1618-22); son of Ahmet I., killed 1622.
- Osman III.**—Sultan of Turkey (1754-57).
- Osprey, The.**—See HAWK, 2529.
- Ossawatimie Brown.**—A name applied to John Brown, anti-slavery agitator. Ossawatimie was the

- place of Brown's residence in Kansas during the troubles there. (See BROWN, JOHN, 72.)
- Ostend Manifesto.**—At Ostend, Belgium, 1854, James Buchanan, American minister to England, John Y. Mason, American minister to France, and Pierre Soule, American minister to Spain, met in a conference having for its object the acquirement of Cuba by the United States. The Ostend Manifesto was the resultant dispatch or state paper.
- Osterhaus, Peter Joseph.**—Born in Germany, 1820. A noted soldier in the Civil War; appointed major in 1864.
- Ostrich, The.**—2619.
- Ostrogoths, or Eastern Goths** were a division of the great Gothic race which inhabited central Europe. (See THEODORIC.)
- Oswego.**—The capital of Oswego Co., N. Y., situated at the mouth of the Oswego River; foreign and coasting trade; leading manufactures of starch. Pop. (1900), 22,199.
- Oswego (N. Y.), Capture of.**—Oswego was defended by Fort Ontario with a garrison of less than 300 Americans commanded by Lieut.-col. Mitchell. On May 5, 1814, these were attacked by a British fleet with 1,200 men under Lieut.-col. Drummond. The British were repulsed, but renewed the attack the following day, effected a landing, and by their overwhelming numbers compelled the Americans to fall back.
- Oswego River.**—In N. Y., flowing into Lake Ontario. Length, 24 miles.
- "Othello," or The Moor of Venice, The Tragedy of.**—A tragedy by Shakespeare, first produced in 1604.
- Otis, Elwell Stephen.**—Born, 1838. An American general, active in the Civil War, and the frontier Indian wars; appointed military governor of the Philippines, 1898.
- Otis, James.**—(1725-1783.) An American patriot and orator; especially noted for his speech at Boston in opposition to the "writs of assistance," in 1761.
- Otsego Lake.**—A lake in Otsego Co., N. Y., the source of the Susquehanna River.
- Ottawa.**—(1) The capital of La Salle Co., Ill. Pop. (1900), 10,558. (2) The capital of Franklin Co., eastern Kan. Pop. (1900), 6,934.
- Ottawa.**—The capital of the Dominion of Canada, is situated on the Ottawa River, 87 miles above the St. Lawrence River. It is 126 miles from Montreal, 95 from Kingston, with which it is connected by the Rideau Canal. Pop., 44,154.
- Ottawa Indians.**—A tribe of the Algonquin stock of American Indians. They originally dwelt in the region of the Ottawa River, Canada, were driven westward to Lake Superior, then located in the region about the present site of Chicago, and finally scattered in all directions and most of them lost their identity. Those that remain, about 5,000 in number, are now in the Indian Territory.
- Otter, The.**—2441.
- Otterburn.**—A village near the Scottish border in Northumberlandshire, England. Here was fought the battle of Otterburn, or Chevy Chase, in 1388.
- Otter Creek.**—A river in western Vt., having its outlet into Lake Champlain. Length, about 90 miles.
- Otter Tail Lake.**—A lake of western Minn.
- Otto, or Otho I., "The Great."**—(912-973.) Crowned emperor of the Holy Roman Empire, 962.
- Otto II.**—(955-983.) Son of Otto I. Emperor of the Holy Roman Empire, 973-983.
- Otto III., "The Wonder of the World."**—(980-1002.) Son of Otto II. Emperor of the Holy Roman Empire (983-1002).
- Otto IV.**—(1174-1218.) Son of Henry the Lion, duke of Saxony and Bavaria. Emperor of the Holy Roman Empire; crowned in 1209.
- Ottoman Empire.**—See TURKEY.
- Ottomans.**—The branch of the Turks that established the Turkish empire; originally dwellers in Central Asia.
- Otway, Thomas.**—(1652-1685.) An eminent English tragic poet, principal representative of the English classical school.
- Ouseley, Sir Frederick Arthur Gore.**—(1825-1889.) English musician, composer, and writer on music.
- Outlaw of the Hedges, An.**—See ANIMAL STORIES, 2725.
- Outram, Sir James.**—(1803-1863.) An English general, distinguished for his services in India.
- Overbeck, Friedrich Johann.**—(1789-1869.) A noted German painter; founder, with others, in 1810, of the Brotherhood of Preraphaelites.
- Overdraw.**—To call for more money than there is on deposit.
- Overland Route.**—(1) The route between England and India, by way of France and Italy, the Suez Canal, Red Sea, and Indian Ocean. (2) In former times, the land route from the east to California, *via* Utah.
- Overijssel.**—A province of Netherlands bordering on the Zuyder Zee. Capital, Zwolle. Chief industry, cattle raising.
- Oviedo.**—A province of northern Spain. Area, 4,091 sq. miles.
- Owasco Lake.**—In Cayuga Co., N. Y. Length, about 11 miles.
- Owed His Life to a Pet Bear.**—See ANIMAL STORIES, 2730.
- Owego.**—The capital of Tioga Co., N. Y. Pop. (1900), 5,039.
- Owens, John Edward.**—(1824-1886.) A noted actor and manager.
- Owensboro.**—The capital of Daviess Co., Ky. Pop. (1900), 13,189.
- Owen's Lake.**—A salt lake in eastern Cal. Length, about 18 miles.
- Owen Sound.**—An inlet of Georgian Bay, Lake Huron.
- Owen's River.**—Flowing into Owen's Lake, Cal. Length, about 175 miles.
- Owl, The.**—2529.
- Owl's Head.**—A cape at the western entrance to Penobscot Bay, Me.
- Owosso, or Owasso.**—A city in Shiawassee Co., Mich. Pop. (1900), 8,696.
- Owyhee River.**—A river in northern Nev., south-western Id., and southeastern Ore. Length, about 350 miles.

Oxford.—Capital of Oxfordshire, England, noted chiefly as the seat of Oxford University. It stands at the junction of the Cherwell and the Thames.

Oxford, Provisions of.—A series of acts of Parliament, enacted in 1258 at Oxford, providing committees to council the king, negotiate funds, adjust the grievances of church and state, etc.

Oxford, University of, consists of 20 colleges, 14 of which were founded previous to the Reformation. It is said that the first was founded by king Alfred. The colleges included under the university are:—University, Balliol, Merton, Exeter, Oriel, Queen's, New College, Lincoln, All Souls, Magdalen, Brasenose, Corpus Christi,

Christ Church, Trinity St. John's, Jesus, Wadham, Pembroke, Worcester, Keble, St. Mary Hall, Magdalen Hall, New Inn Hall, St. Alban Hall, St. Edmund Hall. The revenue of the colleges and the university amounts to about two million dollars a year.

Oxford Street.—Formerly Tyburn Road. The chief commercial thoroughfare of London, leading from the northwestern suburbs to the city.

Oxygen.—See AIR.

Oyster, The.—See MOLLUSK, 2717.

Ozark Mountains.—A group of low mountains in southwestern Mo., northwestern Ark., and the eastern part of Ind. Ter. Height, 1,500-2,000 ft.

Ozone.—See AIR.

P

Paca, William.—(1740-1799.) A politician, a signer of the Declaration of Independence, and governor of Md. (1782-85).

Pacific Railroads.—After the discovery of gold in Cal., and the growing population of the Pacific coast that followed, there was urgent need of a transcontinental railroad. It was not possible to secure from private sources sufficient capital to construct a work so large, and so men looked to the government for aid. In 1860 the platforms of both the Republican and the Democratic parties advocated national aid for this work.

1. President Lincoln approved, July 2, 1862, an act for the construction of the Union Pacific and the Central Pacific roads, the two together making one continuous line from Omaha to San Francisco, a total distance of 1,917 miles. For this they received the sum of \$55,092,017. A later act, July, 1, 1864, gave to these roads, a total of nearly 25,000,000 acres of land. The work was completed and the road opened May 10, 1869.

2. The Northern Pacific, to extend from Lake Superior to Puget Sound and thence to the Columbia River, about 2,000 miles in all, was chartered July 2, 1864, with land grants amounting to 47,000,000 acres. The work was begun in 1870 and completed in 1883.

3. July 27, 1866, the Atlantic and Pacific Road was chartered to run from Springfield, Mo., to the Pacific at a point near the 35th parallel of latitude, a distance of about 2,000 miles, the subsidy being 42,000,000 acres of land.

4. The Southern Pacific Road, to run from Marshall, Tex., through N. M. and Arizona to Los Angeles, Cal., along the 32d parallel of latitude. This road received about the same amount of land per mile as the others.

5. The Great Northern Road, from St. Paul, Minn., to Puget Sound, parallel to the Northern Pacific, built without subsidy, was completed in 1893.

Packard, Alpheus Spring.—(1798-1884.) An American educator, from 1824 professor in Bowdoin College, Maine.

Packer, Asa.—(1806-1879.) An American capitalist and politician; founder of Lehigh University and projector of the Lehigh Valley Railroad.

Paderewski, Ignace Jan.—Born, 1860. The famous Polish pianist, was trained at Warsaw, Berlin, and under Leschetizky at Vienna; made his first appearance in Paris in 1889, and in London the following year; since then his career has been a series of triumphs, if anything, more complete in America than in Europe; his power over his audience is probably greater than that of any pianist since Liszt; he lives in a villa in Switzerland.

Padua.—Capital of the province of Padua, in Italy. It contains several famous churches and a cathedral, and during the Middle Ages was a center of art and literature.

Paganini, Nicolo.—(1782-1840.) Famous Italian violinist.

Page, Thomas Nelson.—Born in Hanover Co., Va., 1853. A lawyer and author; especially noted for his stories of the South.

Page, William.—(1811-1885.) An American portrait painter. His other paintings include "Moses and Aaron on Mt. Horeb" and "Flight into Egypt."

Paine, John Knowles.—Born, 1839. A noted American composer and organist; identified with the musical instruction at Harvard University.

Paine, Robert Treat.—(1731-1814.) One of the signers of the Declaration of Independence, as member of Congress, in 1776.

Paine, Thomas.—(1737-1809.) An Anglo-American political writer and free-thinker; best-known by his "Age of Reason."

Palais Royal.—Built by Richelieu, 1629-34, in Paris, and left by him to the king.

Palatine Hill.—One of "the seven hills" of Rome; the traditional seat of the city founded by Romulus.

Palermo.—A seaport of Sicily, situated on the Bay of Palermo; the largest city and the commercial center of Sicily. Pop., about 300,000.

Palestine.—A country lying along the eastern coast of the Mediterranean Sea, formerly called Ca-

- naan. After the Exodus it was conquered by the Hebrews and divided among the twelve tribes. In the time of Christ the divisions west of the Jordan were Galilee, in the north, Judea in the south, and Samaria lying between. Its location upon the highway from Asia to Africa has made it one of the great battle-grounds of the world. It has been successively under the rule of the Babylonian, Persian, Roman, and Byzantine empires. Since the 7th century it has been under Mohammedan sway except for a brief interval at the time of the Crusades. It has been under Turkish rule since 1516. Its area is about 11,000 sq. miles, or a trifle larger than the state of Vt., which it closely resembles in shape. The chief city is Jerusalem. Pop., about 400,000.
- Palestrina, Giovanni Pierluigi da.**—(1524?-1594.) A celebrated Italian musician. His works mark an epoch in the history of music.
- Palgrave, Francis Turner.**—(1824-1897.) An English poet.
- Palisades, The.**—A beautiful natural feature of the Hudson River, in the form of a basaltic bluff, 200-250 feet in height, extending along the western shore, in the states of New York and New Jersey.
- Palissy, Bernard.**—(1510-1589.) A celebrated French potter and enameler. 2390.
- Pallas, Athene.**—(1) In Greek mythology, the goddess of wisdom and war, 1608. (2) Peter Simon (1741-1811), a German naturalist and traveler. (3) Albani. A Greek bust of colossal size in the Glyptothek at Munich. (4) Of Velletri. A Roman statue copy of a Greek original, of great size, now in the Louvre, Paris.
- Pall Mall.**—A beautiful street in London extending from Trafalgar Square to Green Park.
- Palmer, James Shedden.**—(1810-1867.) An American admiral, prominent during the Civil War.
- Palmer, John McCaulay.**—(1817-1900.) A general in the Civil War.
- Palmer, Walter Launt.**—Born at Albany, N. Y., 1854. An American artist.
- Palmerston, Viscount (HENRY JOHN TEMPLE).**—(1784-1865.) A prominent English statesman.
- Palmyra.**—A city supposed to have been built by King Solomon; situated on an oasis in the desert east of Syria. It is now remarkable for its antiquities.
- Palo Alto.**—A noted California stock-farm, established by Leland Stanford.
- Pamlico Sound.**—An arm of the Atlantic, east of N. C. It is joined to Albemarle Sound on the north by Croatan and Roanoke sounds and to the Atlantic by Ocracoke, Hatteras, and other inlets.
- Pampas.**—A name given to the vast grassy plains of South America, somewhat similar to the North American prairie.
- Pampaloni, Luigi.**—3591.
- Pan.**—See GREEK AND ROMAN MYTHOLOGY, 1622.
- Panama Canal.**—The desirability of a ship canal connecting the Atlantic and Pacific oceans, has been apparent from the first. The Isthmus of Panama was surveyed for such a canal in 1527, and since that time many surveys have been made and plans formed. In 1881 work was begun under the direction of Ferdinand de Lesseps. The company failed in 1889, after 12 of the 54 miles had been completed.
- Panama Congress.**—An assemblage of representatives of the South and Central American Republics in June, 1826, to deliberate on the rights of their states.
- Panics, The Great Financial.**—
- 1814, England, 240 banks suspended.
 - 1824, Manchester, failures, 2,000,000 sterling.
 - 1831, Calcutta, failures, \$15,000,000.
 - 1837, United States, "Wild Cat" crisis, all banks closed.
 - 1839, Bank of England saved by Bank of France. Severe also in France where 93 companies failed for \$6,000,000.
 - 1844, England. State loans to merchants. Bank of England reformed.
 - 1847, England, failures, \$20,000,000, discount 13 per cent.
 - 1857, United States, 7,200 houses failed for \$111,000,000.
 - 1860, London, Overend-Gurney crisis, failures exceeded \$100,000,000.
 - 1869, Black Friday in New York (Wall Street), September 24.
- Pantheon.**—A building in Rome completed by Agrippa in 27 B.C. and now dedicated as the Church of Santa Maria Rotonda. It is the burial place of Raphael and Victor Emmanuel II.
- Paoli.**—In Chester Co., Pennsylvania, 20 miles from Philadelphia; the scene of an engagement between the British and the Americans, Sept. 20, 1777, in which the Americans, under General Wayne, were defeated.
- Paoli, Pascal.**—(1725-1807.) A Corsican general and patriot.
- Papal Insignia, The.**—Embraces the tiara, cross, and ring. The tiara, or high cylindrical cap, with cross of gold on top, symbolizes the Pontiff's civil or temporal rank, as the keys symbolize his ecclesiastical power. The right of the Pope to wear a crown is said to have been granted to the bishops of Rome by Constantine the Great, and by Clovis, founder of the French monarchy. The Pontifical staff or Papal Cross (a Greek cross with three transoms) is symbolical (as the three crowns are) of the Pope's threefold sovereignty. The ring is the Papal signet.
- Papal States.**—A former dominion of Italy governed directly by the Papal See; comprising the Romagna, the Marches, Umbria, and the great province of Rome.
- Papaveraceæ.**—A natural order of exogenous plants, herbaceous, usually containing a milky juice. Opium is its principal product. Many species are used for medicinal purposes.
- Papaw, The.**—2878.

PAPER MAKING.

The earliest form of paper was that made by the Egyptians from the *papyrus* plant, from the name of which the word paper is derived.

Paper Making.—*Continued*

This plant is a species of reed and in the ancient method of paper making its stalks were cut into as thin slices as possible, and placed side by side. Another layer was arranged in a similar manner across the first, and the whole was placed under a press, where it dried into a single sheet. When this was rubbed smooth it formed a kind of paper, that could be used for writing.

The paper of the present time consists of thin sheets, that are composed of vegetable fibers closely felted together. One of the first materials used for making it was cotton, from which paper is said to have been made as early as the 11th century.

Vegetable fibers are all composed of a substance called *cellulose*, together with certain other substances which surround, or incrust the cellulose, and hold the short fibers in which it occurs.

The fibers that seem naturally best adapted for the manufacture of paper are those of cotton and flax, and in a time when the uses of paper were comparatively few, a sufficient quantity of paper-making material was found in the old cotton and linen rags that are always accumulating in every household.

In the manufacture of paper from rags, by the old process, the rags were caused to putrefy for a few days, to remove the substances that incrust the cellulose, and they were then beaten into a pulp, to which a large quantity of water was added. The pulp was thrown into a sieve, in which it was shaken to and fro by the workmen, until the greater part of the water had been drained off, and the cellulose fibers formed a thin felted layer, on the bottom of the sieve. This layer was then piled up with other similar layers, and the whole pile was placed under a press, where more of the water was removed. The layers, or sheets, were taken from the press and dried.

Paper made in this way was loose in texture and very absorbent, like blotting paper. To give it durability and a fit surface on which to write, it was necessary to *size* it. This operation, which filled the pores and gave the paper great firmness, was accomplished by drawing the sheets through a solution of alum and glue, or some similar substances, and then drying them. The paper was then passed between highly polished rollers, to glaze it, or, if so smooth a surface was not desired, it was simply pressed between flat surfaces while moist.

In the modern method of manufacturing paper by machinery, the rags are boiled with caustic soda, to separate the cellulose fibers, and are then placed in a breaker in which rollers set with knives tear the rags to pieces and mix them with water to form a pulp. The pulp is then bleached with chloride of lime, and is passed on to the sizing machine. This machine mixes the pulp with alum and with a kind of soap, made from suitable resins which serves the purpose better than glue.

The pulp, which is now ready to be made into paper, is poured out upon an endless cloth made of fine brass wire. This cloth travels constantly in one direction, by means of rollers, and is given at the same time a sort of vibratory motion, to cause the paper fibers to become more closely felted together. On the wire cloth web are usually woven words, or designs, in wire, that rise above the rest of the surface. These are transferred to the paper, and are called water-marks. The machine then winds the finished paper into rolls, so that it may be handled conveniently.

In the past fifty years, the uses for paper pulp have been so great that the supply of rags has been by no means sufficient to meet the demand for material, and, consequently, much effort has been expended in the production of pulp from other materials. Since all vegetable fibers contain cellulose it would naturally be supposed, that the production of pulp from other materials than rags, would be a simple matter; but a satisfactory substitute that could be prepared at low cost was not found at once. Straw and esparto grass, a plant that grows wild in North America, were found to yield cellulose having the desired qualities, but it was desirable to find some method of converting wood into a pulp suitable for paper making, and many attempts were made before success was obtained. At first the powder formed by grinding up logs was used, but the paper produced was not strong, and could be used for very few purposes.

Finally, however, it was discovered that if wood shavings were boiled in strong solutions of caustic soda, contained in boilers that would stand very high pressure, the shavings were separated, and a very good quality of cellulose for paper manufacture produced. As it comes from the boiler, however, the *soda cellulose*, as that produced in this way is called, is of a dark color, and must be bleached before it is fit for use in paper making.

Of late years the sulphite process for preparing cellulose has almost superseded the soda process. In the former, a solution of the acid sulphite of lime is used instead of caustic acid. Acid sulphite of lime is formed when the fumes from burning sulphur are passed through chimneys filled with lime. This substance does not only disintegrate the wood shavings, but at the same time bleaches the cellulose, making it considerably whiter than that obtained by the soda process.

A difficulty that accompanies the use of acid sulphite of lime in making cellulose was the making of boilers in which the operation could be carried on. The boilers used in the soda process could not be employed with the sulphite, because iron is dissolved by the acid sulphite, and lead, which is not dissolved by it, is too soft to stand the pressure required. The difficulty was finally solved by lining iron boilers with flag stones joined together by a proper kind of cement.

Paper Making.— *Continued*

The sulphite cellulose is now, not only driving out of the market all other materials for making paper, but attempts are being made to disintegrate the wood in such a way, that it may yield cellulose in fibers long enough to be woven with cotton.

The cheap methods of producing cellulose have led to the use of paper and paper pulp for many purposes for which it would otherwise never have been employed. In many cases the paper is used in the form of *papier mâché*, a tough, plastic substance, which is made by mixing glue with paper pulp, or by pressing together a number of layers of paper having glue between. *Papier mâché* can easily be molded into any desired form, and after drying it forms a very tough substance and one that will stand rough usage. It has been employed for making dishes and utensils of many other kinds, for making the matrices for electrotype plates, for car wheels, and it has recently been molded into boards that were used in building houses.

Paper, Sizes of.— Various kinds of paper, and sometimes several makes of the same paper, are cut in sheets of different sizes, known by special names. The English and American divisions number forty-eight in all. The following list, contains those most ordinarily encountered. It will be noted that the American sheets, though bearing the same names, seldom measure quite the same as the English, which nominally correspond :—

NAME OF SHEET	SIZE	
	ENGLAND	U. S.
	Inches	Inches
Imperial	21 × 26	23 × 31
Double Imperial	22 × 30¼	22 × 30
		32 × 46
Medium	19 × 24	18 × 22½
		19 × 24
Royal	20 × 25	20 × 25
Double Royal	40 × 25	24 × 38
		26 × 40
Elephant	23 × 28	23 × 28
	{ 20 × 30 }	
Double Elephant	{ 23 × 48 }	27 × 40
	{ 26½ × 40 }	
Foolscap	{ 13½ × 16½ }	12½ × 16
	{ 14 × 18¾ }	
Double Foolscap	{ 16½ × 26½ }	..
	{ 17 × 27 }	
Foolscap and Half	13¾ × 24¾	..
" " Third	13¾ × 22	..
Post (Double Post, 31¼ × 19¾)	15¼ × 19	..
Crown (Double Crown, 30 × 20)	16¼ × 21	15 × 19
	{ 15½ × 20 }	Varies from
Demy (Double Demy, 35 × 22½)	{ 17¾ × 22½ }	14½ × 18½
		to
Letter . . . . .	..	16 × 24
Billet Note . . . . .	..	10 × 16
Legal Foolscap . . . . .	..	6 × 8
8vo Note . . . . .	..	8 × 24
Antiquarian . . . . .	..	7 × 9
Web	31 × 53 60 in. wide	31 × 53 various

But the "leaves" of a book are always consistently named according to the number of foldings undergone by the sheet, irrespective of the latter's original size. Thus, a volume consisting of leaves folded once only is a *folio*, the sheet making two leaves, *i. e.*, four pages. *Quarto* has 2 foldings, 4 leaves, and 8 pages; *octavo*, 4 foldings and 8 leaves; *duodecimo*, 6 foldings and 12 leaves. The names 4to, 8vo, 16mo, 18mo, 24mo, and 32mo, representing the number of leaves, which is, of course, half that of the pages and twice that of the foldings.

Paper, Negotiable, is documentary evidence of debt, and includes promissory notes, due bills, drafts, checks, deposit certificates, bills of exchange, bank bills, and Treasury notes. Such documentary evidence of debt must contain a promise to pay or an order for another to pay. One receiving such paper must see that the amount is exactly stated, that the paper is transferable and signatures and names are correctly written.

Paper, The Evening.—3123.

Paper, The Sunday.—3124.

Paphos.— The name of two cities of ancient Cyprus.

Papilionaceæ.— Suborder of the natural order *Leguminosæ*. The name is derived from Lat. *papilio* meaning "a butterfly." The flowers have five petals; about 4,800 species are known.

Papineau, Louis Joseph.— (1786-1871.) A French-Canadian statesman.

Papua.— See NEW GUINEA.

Papyrus.— A genus of plants of the natural order *Cyperaceæ* of which there are seven species. It grows eight to ten feet high and has a strong, woody aromatic root, with long keel-shaped leaves. Up to the 12th century, papyrus, after passing through an elementary process of manufacture, was used for the making of books but after that period was superseded by parchment.

Paracelsus.— A poem by Robert Browning published 1835-36.

Paradise (Koran).—1746.

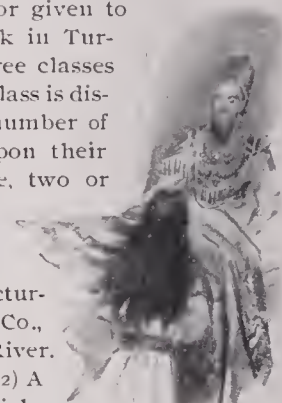
Paraguay.— A republic of South America lying south of Brazil and Bolivia. Capital, Asuncion. The products are of a tropical nature. Number of white inhabitants (1897), about 600,000. The country has limited railway and telegraph facilities.

Pardons.— In the United States the President has power to grant reprieves and pardons for offenses against the government except in cases of impeachment.

Paregoric.— An alcoholic solution of opium, benzoic acid, camphor, and oil of anise.

Parepa-Rosa.— (1836-1874.) A famous soprano singer in oratorio and opera.

- Paris.**—The capital of France, situated on both banks of the Seine, is the third city in size, and the first in splendor, in the world. It has large manufacturing and commercial interests, and is noted for its patronage of the fine arts. It has been greatly beautified by various sovereigns, especially Napoleon I. and Napoleon III. Among its magnificent buildings are the beautiful church of the Madeline, the Grand Opera, which is the most sumptuous theater in existence, and the palace of the Louvre, which is in the foremost rank of museums of fine arts. Its area of 30 sq. miles, is inclosed within 22 miles of fortifications. Pop., about 3,000,000.
- Paris.**—(1) A town of Illinois. Pop. (1900), 6,105. (2) A town of Kentucky. Pop. (1900), 4,603.
- Paris** (Greek Mythology).—1715.
- Paris, Declaration of.**—A treaty entered into by Russia, Turkey, Great Britain, France, and Sardinia, in 1856, to abandon privateering. The United States refused to subscribe to the agreement, which operated greatly against this country in its relations with foreign countries during the Civil War.
- Paris, Monetary Conferences at.**—There have been three notable international monetary conferences, all futile, held at Paris. The first was convened in 1867; the second in 1878, and the third in 1881.
- Paris Green.**—Arsenite of copper; a compound of oxide and arsenious acid.
- Paris Tribunal of Arbitration.**—A treaty between Great Britain and the U. S. signed at Paris, Feb. 29, 1892, regulating the killing of seals in Bering Sea.
- Park, Mungo.**—(1771-1806.) A noted African explorer.
- Parker, Gilbert.**—(1862-.) Canadian novelist and dramatist.
- Parker, Isaac.**—(1768-1830.) An American jurist, Federalist member of Congress from Mass. (1797-99); appointed a judge of the supreme court of Mass. in 1806, professor at Harvard (1816-27.)
- Parker, Theodore.**—(1810-1860.) An eminent American clergyman, author, lecturer, and reformer.
- Parker, Willard.**—(1800-1884.) A distinguished American surgeon.
- Parkersburg.**—The capital of Wood Co., W. Va., and second city in the state; leading industry, the refining of petroleum. Pop. (1900), 11,703.
- Parkhurst, Charles Henry.**—Born at Framingham, Mass., 1842. A noted Presbyterian clergyman and reformer, of New York City.
- Parkman, Francis.**—(1823-1893.) An eminent American historian.
- Park Range.**—A chain of the Rocky Mountains in Col., west of South Park. The highest peak is Mount Lincoln, 14,297 feet.
- Parnassus.**—A mountain ridge in Greece near the ancient Delphi.
- Parnell, Charles Stewart.**—(1846-1891.) An Irish statesman; first president of the Irish Land League.
- Paroquet, The.**—See PARROT, 2598.
- Parr, Samuel.**—(1747-1825.) A noted English scholar.
- Parris, Samuel.**—(1653-1720.) A Congregational clergyman identified with the Salem witchcraft persecution.
- Parrot, The.**—See KEEPING OF PETS, 2312.
- Parrot, The.**—2596.
- Parrott, Robert Parker.**—(1804-1877.) An inventor; superintendent of the West Point iron and cannon foundry, Cold Spring, N. Y., and inventor of the Parrott gun.
- Parry, Sir William Edward.**—(1790-1855.) An English navigator and Arctic explorer.
- Parthenon.**—The official temple of Pallas at Athens. It was begun by Ictinus about 450 B.C.
- Partington, Mrs.**—A humorous character created by Benjamin Penhallow Shillaber (which see).
- Parton, Arthur.**—Born at Hudson, N. Y., 1842. A landscape-painter.
- Parton, James.**—(1822-1891.) A biographer and miscellaneous writer.
- Parton, Mrs. (SARA PAYSON WILLIS) pseudonym, FANNY FERN.**—(1811-1872.) An American author; wife of James Parton, and sister of N. P. Willis.
- Partridge.**—2511.
- Partridge-vine.**—2903.
- Par Value.**—The face, or nominal, value.
- Pascal, Blaise.**—(1623-1662.) A celebrated French philosopher, geometrician, and writer.
- Pasha.**—A title of honor given to officers of high rank in Turkey. There are three classes of Pashas, and the class is distinguished by the number of horsetails borne upon their standard, being one, two or three; the Pasha of three horsetails ranks the highest.
- Passaic.**—(1) A manufacturing city in Passaic Co., N. J., on the Passaic River. Pop. (1900), 27,777. (2) A river in N. J., which flows into Newark Bay. At Paterson it forms a cataract of 72 feet. Length, about 100 miles.
- Passamaquoddy Bay.**—An arm of the Atlantic, between Me. and New Brunswick. Length, about 15 miles.
- Passion in Children.**—890.
- Pastimes, Sports, and Games.**—1847.
- Patagonia.**—The most southern portion of South America. It includes the adjoining parts of Chile, and that portion of the Argentine Republic lying south of the Rio Negro. There are flourishing coast settlements, but the interior of the country is barren and sparsely inhabited.
- Paterson.**—The capital of Passaic Co., N. J., and the third city in the state. It has many and extensive manufacturing interests. Pop. (1900), 105,171.
- Paterson, or Patterson, William.**—(1744-1806.) An American jurist and statesman; justice of the U. S. Supreme Court (1793-1806).
- Paterson, William.**—(1658-1719.) A Scotch adventurer, whose scheme to plant a colony on the Isthmus of Darien met with disaster. He was the originator of the plan of the Bank of England.
- Pathfinder, or Pathfinder of the Rocky Mountains, The.**—A name given to John C. Fremont, owing to his explorations, 1840-50.



- Patrick, St.**—(396-469.) Ireland's patron saint.
- Patroclus.**—See **STORY OF THE ILIAD**, 1715.
- Patroons.**—Early settlers of the New Netherlands, or the old Dutch government of N. Y. and N. J., who received tracts of land, with privileges and exemptions akin to those of feudalism, as a compensation for colonizing the country. The last traces of patroonship were abolished in 1850.
- Patterson, Elizabeth.**—(1785-1879.) Daughter of a Baltimore merchant; wife of Jerome Bonaparte, a brother of Napoleon; the latter refused to recognize the marriage and it was finally annulled.
- Patterson, Robert.**—(1792-1881.) A general in the Civil War.
- Patti, Adellna.**—(1843-.) A celebrated soprano opera singer, the most popular of her time.
- Paul, Saint.**—(Suffered martyrdom 67 A.D.) The great apostle to the Gentiles.
- Paul I.**—Pope of Rome, 757-767.
- Paul II.**—(Pietro Barbo, 1418-1471.) Pope, 1464-71.
- Paul III.**—(Alessandro Farnese, 1468-1549.) Pope, 1534-49.
- Paul IV.**—(Giovanni Pietro Caraffa, 1476-1559.) Pope 1555-59.
- Paul V.**—(Camillo Borghese, 1552-1621.) Pope, 1605-21.
- Paulding, Hiram.**—(1797-1878.) An American admiral; prominent in the victory of Lake Champlain, in 1814.
- Paulding, James Kirke.**—(1779-1860.) Author, historian, and politician; secretary of the navy (1838-41).
- Paulist Fathers.**—A body of Roman Catholic monks who profess to follow the example of St. Paul.
- Paulus Hook.**—The former name of the site of Jersey City. The British garrison was defeated here and the place taken by the Americans under Henry Lee, 1779.
- Paul vs. Virginia.**—A celebrated decision of the U. S. supreme court. One Samuel Paul, representing a N. Y. insurance company, had been fined for refusing to comply with the terms of a law of Va. regulating insurance companies not incorporated under the laws of that state. The decision of the court was read by Justice Field, who upheld the constitutionality of the law, and contended that insurance policies are local transactions governed by local laws, corporations not being citizens under the Federal Constitution.
- Pausanias.**—(1) A Spartan general who died about 466 B.C. (2) A famous Greek geographer and writer on art, who lived in the 2d century.
- Pawnee Indians.**—A confederacy of North American Indians of Caddoan stock, formerly living in Kansas and Nebraska, but now on a reservation in Oklahoma. They number about 800 and are divided into 4 tribes.
- Pawtucket.**—(1) A town in Providence Co., R. I., on the Pawtucket River. Manufacturing interests. Pop. (1900), 39,231.
- Pawtuxet.**—A river of R. I., flowing into the Providence River.
- Payne, John Howard.**—(1792-1852.) Dramatist, actor, and song writer; author "Home, Sweet Home."
- Peabody.**—A town in Essex Co., Mass., formerly South Danvers. It manufactures leather, morocco, etc. Pop. (1900), 11,523.
- Peabody, George.**—(1795-1869.) A merchant, banker, and philanthropist; founder of the Peabody Institute in Baltimore.
- Peabody Institute.**—A noted educational institution of Baltimore, founded by George Peabody.
- Peabody, Nathaniel.**—(1741-1823.) A Revolutionary soldier, delegate to the Continental Congress.
- Peace Commission.**—The Earl of Carlisle, George Johnson, and William Eden were sent by Lord North, in 1778, to negotiate peace with the colonists, but as they could not acknowledge the independence of the colonies, Congress refused to deal with them.
- Peace Conferences.**—(1) The first of these met at Washington, Feb. 4, 1861, for the purpose of averting civil war, and represented 21 states and territories. Various amendments to the Constitution were proposed relating to the question of slavery, but no action was taken by Congress. (2) In July, 1864, President Lincoln authorized Horace Greeley to confer with representatives of the Confederacy at Niagara Falls with a view to ending the war. (3) Col. Jacques and J. R. Gillmore about the same time held an unsuccessful conference with Jefferson Davis at Richmond. (4) The last conference was arranged by Francis P. Blair, Sr. This was held at Hampton Roads, Feb. 3, 1865, between certain Confederate officials and Secretary Seward, President Lincoln also being within reach.
- All these conferences came to nothing, as neither party would concede the main point at issue.
- Peach Orchard.**—The scene of fierce fighting on the second day of the battle of Gettysburg, July 2, 1863.
- Peach-tree Creek, Battle of.**—July 20, 1864; one of the hard-fought battles of the Atlanta campaign between Gen. Hood, who led the Confederates, and Gen. Sherman. After several hours' hard fighting the Confederates withdrew. The Federal loss was 1,700, while that of the Confederates was about 3,000.
- "Peacock," The.**—A famous sloop of war of 8 guns which did gallant service in the War of 1812. She captured the British ships "Epervier" and "Nautilus."
- Peacock, The.**—2590.
- Peale, Charles Willson.**—(1741-1827.) A noted American portrait painter.
- Peale, Rembrandt.**—(1778-1860.) A portrait painter, son of C. W. Peale.
- Pear, The.**—See **APPLE**, 2842.
- Pea Ridge (Ark.), Battle of.**—Fought March 7-8, 1862. The Confederates, under General Van Dorn, were defeated by the Federals, under Gen. Custer. The loss was about 1,300 on each side.
- Pearl.**—It is to disturbing influences in the domestic life of a harmless mollusk that we owe the creation of pearls—the only gem the ocean yields. Certain shell fish are able to deposit layers of a protective material around sand grains, parasites, or other foreign substance,

- which enters the valve and injures the soft body tissues; the finest pearls are, consequently, formed near the most vulnerable parts. The Chinese have for centuries utilized this molluscan peculiarity in the production of artificial pearls. They insert pellets within the valves of pearl mussel, and then cultivate them in ponds until a nacreous layer is secreted around the source of irritation. Pearl fishing is carried on in the rivers of several countries—Scotch pearls were famous in the Middle Ages—but the finest specimens are marine, and come from the East: Ceylon, the Persian Gulf, and Sulu Archipelago are the most productive regions. The diver's equipment used to be decidedly primitive; a stone to accelerate the descent and a rope for hauling up. This limited the fisheries to a depth of 80 feet, and few men could stay below more than a minute. A modern diving suit and air-pipe allows descents of about 108 feet, and, though at such depths the pressure can only be borne for about ten minutes, in shallow water men remain below for hours. Pearls have always been highly prized gems, good specimens are far more costly than diamonds. Successful imitations are made by filling thin glass bulbs with certain fish scales dissolved in ammonia.
- Pearl.**—A river in Miss., which forms part of the boundary between Miss. and La. and empties into the Gulf of Mexico. Length, over 300 miles.
- Pearl Oyster.**—2649.
- Peary, Robert Edwin.**—Born in 1854. An Arctic explorer, and civil engineer in the U. S. navy.
- Pecan, The.**—2829.
- Peccary, The.**—2457.
- Peck, John James.**—(1821-1878.) A general in the Mexican War, and in the Civil War.
- Pedro I.**—(DOM ANTONIO PEDRO DE ALCANTARA BOURBON, 1798-1834.) First Emperor of Brazil.
- Pedro II.**—(DOM PEDRO DE ALCANTARA, 1825-1891.) Son of Pedro I., second Emperor of Brazil.
- Peekskill.**—A village in Westchester Co., N. Y. It has iron manufactures. Pop. (1900), 10,358.
- Peel, Sir Robert.**—(1788-1850.) A famous English statesman.
- Pegasus.**—(1) In classical mythology, the winged horse of the Muses. (2) An ancient constellation.
- Pegram, John.**—(1832-1865.) A noted officer of artillery in the Confederate army.
- Peirce, Benjamin.**—(1809-1880.) A distinguished American mathematician and astronomer.
- Peirce, Charles Sanders.**—Born at Cambridge, Mass., 1839. A physician, mathematician, and logician, son of Benjamin Peirce. He was connected with the U. S. Coast and Geodetic Survey for many years, has been lecturer on logic at Harvard and at Johns Hopkins University.
- Peirce, Ebenezer Weaver.**—Born at Freetown, Mass., 1822. A general and historical writer. His writings include "The Peirce Family of the Old Colony" and "Indian History, Biography, and Genealogy."
- Peirce, James Mills.**—Born at Cambridge, Mass., 1834. A mathematician, son of Benjamin Peirce, professor of astronomy and mathematics in Harvard University since 1885. His works include "A Text-book of Analytical Geometry" and "The Elements of Logarithms."
- Peking.**—The capital of the Chinese empire. It consists of two cities—the Chinese city and the Tatar. Pop., over 500,000.
- Pelham, Sir Henry.**—(1696-1754.) An English statesman.
- Pelican, The.**—2603.
- Pelican State.**—The state of Louisiana; so named from the pelican on its coat-of-arms.
- Pelopidas.**—(Killed 364 B.C.) A Theban general, leader in the liberation of Thebes from the Spartans 379 B.C.
- Peloponnesian War.**—A war between the Peloponnesian confederacy under the lead of Sparta and its allies on one side, and Athens and its allies on the other. It was carried on from 431 to 404 B.C.
- Peloponnesus.**—The modern Morea. The early name of the peninsula which forms southern Greece. Area, 8,288 sq. miles.
- Pemberton, John Clifford.**—(1814-1881.) An American soldier; lieutenant-general in the Confederate army.
- Pemigewasset.**—A river in N. H., which unites with the Winnepesaukee to form the Merrimac. Length, about 70 miles.
- Pendleton, Edmund.**—(1721-1803.) An American statesman; member of the Va. House of Burgesses; member of the Continental Congress in 1774.
- Pendleton, George Hunt.**—(1825-1889.) An American politician.
- Pendleton, William Nelson.**—(1809-1883.) A general in the Army of Northern Virginia.
- Penelope.**—See STORY OF THE ODYSSEY, 1725.
- Penguin.**—A sea-bird inhabiting the southern hemisphere, especially the regions of Cape Horn and the Cape of Good Hope, having web feet and small flipper-like wings that are useful for swimming, but useless for flying.
- Peninsular Campaign.**—See McCLELLAN, GEORGE BRINTON, 408.
- Peninsular State.**—A name sometimes given to Florida.
- Penitent Monkey, The.**—See ANIMAL STORIES, 2732.
- Penitentiaries.**—Places for the confinement of convicts for punishment or reformation. The system was introduced by the Quakers of Philadelphia in 1686 when solitary confinement at hard labor was substituted for death, mutilation, or whipping. The House of Refuge on Blackwell's Island, N. Y., dates from 1825, and was the first reformatory institution in the U. S. for the young.
- PENMANSHIP.**—
- Nearly every nation of antiquity has at some period of its history attributed the origin of letters to the beneficence of the divine beings that they worshiped. This appears not only from the statements of writers but from the nature and meaning of the words used for writing. In the Egyptian language the term "writing" signified: "Writing heavenly words."

Penmanship.— *Continued*

This meaning is not only beautiful but essentially true, for whatever may be the origin of letters, no gift of invention has been so useful nor has contributed so much to the advancement and the civilization of men, as the art of writing.

The study of the writings of the different nations shows us that there were generally two motives that guided their course of progress. The most important was the desire to save work. The other was the love of beauty. The desire for beauty was especially marked in the Europeans and led to the Gothic script, but our own forms of writing have developed through the constant forming of the Roman letters with a pen in such a way as to not only save time but to give the letters lines of beauty.

Whatever your profession in life may be, there is nothing that you will find more important to your progress than the art of writing well. The world has many places for good penmen. Too many people look upon writing as something that anybody can accomplish and think that it does not matter how it is done. A certain amount of individuality in penmanship there will surely be, but this can remain even if the fixed rules for good penmanship are closely followed. Your own characteristic style will take care of itself, and, if you carefully follow the rules which are considered as essential in the art of writing well, you will not only learn to write a good clear hand, but will always preserve it.

It has been clearly demonstrated that the use of the pen, even for long periods of time, is not unhealthful or exhausting, providing it is used in the right way. This is a very important matter to book-keepers, copyists, or others who are using a pen constantly, and who are liable to what is known as "writer's cramp," unless they carefully observe the rules for correctly holding the pen. Some people sit down to write as if they were inviting an attack of cramps. They sit or hold the pen so as to produce an undue strain on muscles which ought to act freely. There is no occupation more tedious and none more severe upon the energies of a person than the use of the pen by improper methods. Many men and women whose health has broken under the task of writing, have failed and suffered, not so much from the difficulty of their work as from the attempt to do it in the unnatural and the hardest way. It is no use to fight against nature and whoever attempts it must suffer in the end.

The knowledge pertaining to penmanship has been classified and the rules of the natural methods have been made complete. Anyone who follows them carefully will be rewarded by a power to write easily and rapidly.

The style of writing which has had the approval of a long period is known as the slanting or Spencerian style. The letters are formed at an oblique angle to the line. A mode which has recently come into common use in many

schools is called the vertical style, for the letters are formed perpendicularly to the line. Some advantages in the way of clearness are claimed for this, but the friends of the old method say that vertical letters do not admit of either the grace or the rapidity of the old method. But whichever style is used, the general rules for the natural way of using the pen apply. These are more important than the mere matter of the slant of the letters.

Attention must first be paid to the matter of a correct position. You cannot write well lying down nor can you write well if you curl yourself up into an awkward and cramped position at the table or desk. There are recognized three different positions, any one of which is proper. The Front Position is most generally used and most recommended, especially to students who are learning to write. In this position you should sit square with the desk but not in contact with it. Keep the body erect and the feet level on the floor. Place the paper on the table directly in front of you and, if you are to write by the slanting method, it should be in a position oblique to the body but square with the right hand. If using the vertical method, the paper should be nearer square with the body. Let the left arm rest on the table with the hand on the paper to steady it.

In what is known as the Right Side Position you should sit with the right side to the desk but without touching it. Let the paper lie square with the edge of the desk or nearly so and place the right arm on the desk parallel to the edge. The left hand may be placed on the paper so that the left arm makes right angles to the right arm. If the paper is made fast the left hand may be left free. This is a good position to use, therefore, if you wish to hold a book in the left hand while writing. In this position as in the other and in fact in any position the body should be erect and the feet should rest squarely on the floor.

The Left Side Position is a very convenient one in counting houses where large books are used. The left side is turned to the desk and the left arm is placed parallel to the edge of the desk with the hand on the paper above the writing. The right arm should be nearly at a right angle with the desk. The most important matter to observe in all these positions is that the muscles of the arms and the right hand should be free to move. Any position which binds the right arm to the desk requires the muscles of the hand to do all the work. This in time must result in weariness and pains not only in the hand but in the arm. Moreover, it cannot result in good penmanship.

Three different movements may be noticed in writing: First, the Finger Movement; second, the Forearm or Muscular Movement, and third, the Off Hand or Whole Arm Movement.

To secure the proper finger movement the arm should touch the table on the muscles only and about three inches from the elbow. You should hold the wrist clear from the table and

Penmanship.—*Continued*

square, so that a pencil laid on the wrist would be nearly in a horizontal position. Always hold the pen between the thumb and first and second fingers. Keep the second finger nearly straight with the tip about three-quarters of an inch from the point of the pen. The penholder should rest half-way between the tip of the finger and the first joint. The forefinger which should also be nearly straight, should rest over the holder. The thumb, slightly bent with its end against the holder opposite the first joint of the forefinger, keeps the holder in a proper position. Guard against letting the holder drop into the hollow between the forefinger and the thumb. The upward strokes of the pen are made by extending the first two fingers and thumb and the downward strokes by contracting them. The hand should glide over the paper on the nails of the third and fourth fingers which should be kept closed above the second joints. This position you will see if you will try it gives the hand perfect freedom and enables it to readily guide the pen in any desired direction with very little effort.

The same position of arm and hand is used in the Muscular or Forearm Movement as in the Finger Movement, but instead of forming the letters by the extension and contraction of the fingers, they are formed by letting the hand, the wrist, and the pen move together. The pen practically remains fixed in the fingers, but the arm, rolling on the muscle near the elbow, gives the necessary motion for the making of the letters. Undoubtedly you will find that this does not come so easily or so naturally at first as the Finger Movement, but it is regarded as the proper movement for business writing. You will notice it often if you are in banks or counting houses. It is a good plan to practise the movement when you are learning to write and in a short time with care you will acquire a good business hand.

When a business man is seeking good clerks or employees he always wishes to see a sample of their handwriting and he can tell very quickly something of the qualifications of an applicant by the way he writes. If he sees a good business hand, such as you may with practice acquire by the Forearm Movement, he will give the one who shows it the preference, other things being equal.

The Off Hand or Whole Arm Movement is only used in making large capital letters or in ornamental writing. It consists in raising the elbow from the desk and moving the whole arm with the pen. The hand slides along on the nails of the third and fourth fingers. This is such a movement as you would make if you were writing in large letters on a blackboard. It is frequently useful to a good penman, but the essentials of a good hand are all contained in the first two movements mentioned.

Very often new styles, something like the varied fashions in dress, come into more or less common use. One of these consists in taking

the penholder between the first and second fingers. This is apt to be formed by those using a stub pen. But a position like this is not adapted to constant writing nor does it make a good business hand. Such a method is apt to lead to a sprawling style of writing and it is generally hard to read when the writer attempts to write fast. Moreover, it cramps the hand. It is not so easy on the nerves. Any one who is compelled to write his signature a great many times a day, one signature following another, will find himself quickly worn out with the effort, unless he adopts one of the proper positions described above.

If you wish to write nicely you should practise writing by these proper movements of the hand and fingers, hand and arm, and then adhere to them. When you have acquired enough skill to write well in this way, you would destroy all your good work if you tried to adopt another method which might come into style for the time being. In trying to learn the new style you would not simply undo all your good work on the old but what you had done would prevent your accomplishment of good penmanship by the new method. One would destroy the other. Business men see many samples of handwriting showing that the gift of writing clearly has been destroyed in this way. It will be evident in the irregularity of the letters. It is this which often makes such a style difficult to read. By making such a mistake you will find that you get into the way of never writing twice alike. The writing at the end of a short letter even, will not look like that at the beginning. This fault would prevent your keeping a neat set of books. You can only do this by adopting a proper style and sticking to it.

Having secured an understanding of the proper position to assume and the correct movements to make in your pen practice, you should then acquire a knowledge of the principles on which different letters are formed. While no two letters are alike, it is found that when correctly made all are made up of straight and curved lines. The straight lines should all be parallel and of the same slant. The curved ones are either convex or curving outward; concave or curving inward and sometimes a combination of the two called compound curves. Now in all the poor handwriting you observe, you will notice that the straight lines are not always of the same slant. This gives the writing a ragged and uneven appearance. Then you will notice that some lines are curved that should be straight, and you will see that of the curved lines some curve too much and some not enough. No good penmanship has such variations as these. Every stroke of the pen will show perfectly one of these three principles of formation of letters. It is these which give a good handwriting that even appearance.

In vertical writing the straight lines are of course perpendicular and the curved lines conform to them, but in the older style of making slanting letters, good penmen are agreed that

Penmanship.—*Continued*

the angle or slant should be about 53 degrees from the base line. You know that a right angle is 90 degrees and thus an angle of 53 degrees would be a little more than half of a right angle. To write at a slant of 45 degrees or half of the right angle would give it too much of a slant either for speed or good looks.

Shading is not essential to good writing but when it is properly done adds to its beauty. It is always made when the pen is brought toward you by pressing slightly and gradually on the pen. Care should be taken not to press too suddenly or too hard. Too much shading is not only tiresome for the hand but destroys the beauty of the writing. There should never be but one shade in a capital letter. In the small letters, many prefer to shade only the letters d, p, and t. At any rate it will be better for you when learning to write or in striving to improve your writing to follow this plan at first. After the principles of the formation of the letters are mastered you may practise shading with less danger of mistakes. You can always tell where a capital letter should be shaded, for as a rule it can conveniently occur in but one place. It is always when the pen is drawn directly toward you.

It will be of advantage to you in the first place to make a study of each letter before you attempt to write sentences. Many people fail to acquire a good handwriting because they never take the trouble to do this but begin at once to copy lines. In doing this they strive simply to imitate the general appearance of the copy, without being informed of the real principles on which the letters were formed. Get a perfect understanding of one letter before you go to another. Learn just how it is made and then practise making it till it comes easily. This is the same kind of practice which would be required of you were you to study drawing. You would not sit down to draw a picture at once. At first you would be told to practice in making straight lines and then in drawing curved lines with reference to the straight ones. In time you could draw a face or a tree but you could draw nothing well till you had first mastered the principles.

You will find that all small letters are formed by a combination of three different lines, a concave curve, a convex curve, and a straight line, and by making these lines all at the same angle your letters will all be alike.

The line on which the writing rests is called the base line and that at the head of the shorter of the small letters is called the head line. While both lines are used for the first instruction in writing, only the base line is used on ordinary paper. It is supposed that the writer will become so proficient in making the small letters that he will need only the base line to guide him. Many prefer no line at all.

The first principle of making small letters is a convex curve commencing at the base line and running at the proper angle to the head

line. When you write the small letter "a" for example, you begin at the base line and run a convex curve to the head line. You then come back to the base line with another convex curve. The next move is on the second principle of the concave curve by which the pen ascends again to the head line. You next return the pen to the base line with a perfectly straight line which is the third principle. You then finish the letter with a line which will connect it with the next letter and which may be either a convex or concave curve according to the letter.

In making this letter, therefore, there are five distinct movements but they are of only three kinds. No matter how many movements are required to form any small letter, you will always find that they are always of these three kinds. You can do no better than to practise for a little in making these different curves and the straight line. When you have once become skilful in this, the making of good letters will come easily. Study each letter in your copy and observe just how the three different lines are employed in each.

You will notice the same kinds of lines in the formation of capital letters. One very common stroke is the Capital Stem which you recognize as the first part of the letters A and M. This is modified in various letters, but all are formed of convex and concave curves. So also are the oval forms, such as are seen in the capital letter O. There is an inverted oval which is used in the first part of the letter W. By a little examination of your copy in accordance with these simple principles you will observe at once the proper way for making all the letters.

If you have already learned to write merely by copying certain lines of copy and without an understanding of the principles, you can greatly improve your hand by practice according to the principles. Take any letter and write it a great many times in succession, studying carefully the nature of each curve. You cannot give too much care to these little things at first. After a time they will become second nature and you will see that it is as easy to write a perfect and a graceful hand as it was to write in an uneven, careless way.

Many people write fairly well when young but gradually get careless and allow their writing to become worse and worse till it is well-nigh impossible to read it. Those who are writing very much and very rapidly easily fall into this mistake. They might easily avoid it with a little care and they would save their friends a great deal of time in trying to make out letters they have received. But those who fall into this habit are generally those who learned to write without an understanding of the first principles. They just let their handwriting grow up as a tree does in the woods without any care. With a handwriting properly acquired in the first place, you will find that you may easily preserve it, no matter how much it may be your lot to write or how rapidly. Many

Penmanship.—*Continued*

people who have carefully followed these rules have been able to write beautifully graceful hands when they have become very old.

Flourishing is the art of making various figures of beautifying letters by means of a rapid whole arm movement of the pen. This species of the penman's art was practised in very early days of writing. It was regarded not only as a distinctive feature of penmanship in the production of designs representing birds, animals, and fishes, but it was used for the embellishment of writing important documents. It was of greater practical advantage in former times than it is to-day.

Before the discovery of printing when the books of the world were written and during the centuries immediately following the discovery of printing the art of flourishing was extensively used. It was considered as a valuable accomplishment and anyone who could do it nicely was sure of a plenty of work. Many of the written books were illustrated with fanciful pen designs called "illuminations" and important state papers or letters patent or charters were beautifully written and embellished by clever penmen. Even now such services are often required in making certificates of membership in societies or in memorial resolutions which are intended to be framed for preservation.

But a good round clear hand is now generally regarded as of much more practical advantage. Every legislature, including the Congress of the United States, has engrossing clerks who write out the official copies of bills and resolutions on very durable paper. It is necessary that such documents should not only be perfectly legible but that they should be punctuated exactly right. Often grave disputes in law arise over the meaning of the words, and this meaning very often depends upon where a comma or a semicolon is placed. If you should go to Washington you would find in the archives of the Department of State many volumes of bills and other documents which have been written by penmen who write perfect hands. These are the official copies. All printed laws are made from copies of these. The clerks who make these copies do nothing else and receive handsome salaries for their work. They have acquired the skill in writing perfectly through the practice of the principles which have been stated above.

In some of these documents you will observe evidences of skill in flourishing with the pen, and the exercise of the hand in making long, graceful lines tends to give ease and dexterity in the execution of practical writing. When seated for flourishing you should employ the Front Position, already explained, for it enables one to use the arm more freely. The pen must be held differently so as to give the shading to the upward or outward stroke instead of the downward or inward stroke as in the direct or ordinary position when writing.

Sit squarely at the desk, as close as is practicable without touching it. Let the left hand rest upon and hold the paper in the proper position which must always be in harmony with the position of the right hand and pen. The penholder is held between the thumb and first and fore fingers. The thumb presses upon the holder about two inches from the point of the pen. The first finger is bent at the second joint and forms nearly a right angle. It is held considerably back of the second finger which rests upon the under side of the holder and supports it. It should rest about midway between the thumb and the point of the pen. The third finger rests upon the fourth. The nail of the latter rests lightly upon the paper about one and one-half inches from the pen in a straight line from the point, and parallel with the arm.

For some kinds of work in which longer lines are made, the position may be changed so that the ball of the hand instead of the nail of the fourth finger rests upon the table or paper. This method is preferred in work requiring large sweeps of the pen. In the former method the fingers are liable to strike into the ink lines and mar the work. In the ornamentation of letters and in the making of small designs or in any off-hand pen work the former method is, however, generally employed.

The movement employed in all flourishing is that of the whole arm. This is obtained by raising the entire arm free from the table. The hand rests lightly upon the nail of the fourth finger and all the motion of the arm is from the shoulder. This gives the greatest freedom and scope to the movements of the pen. The same movement is used when making large capitals. When the arm rests upon the ball of the hand the hand does more and the arm less, for the hand works upon the ball as a pivot. But in all cases the arm should be free to move.

You should not make any attempts to acquire the art of flourishing till you have mastered the principles of making good letters and perfected your writing so far as possible. When this has been done you will find the practice in flourishing, while a separate accomplishment, will give you a greater facility in ordinary writing. But flourishing should not be a part of your ordinary writing. You should strive to make that plain and even. Flourishing will provide you with amusement for many an hour and will enable you in time to draw some very beautiful designs with the pen. It will often supplement your writing, for sometimes you may wish to prepare some paper with ornamental letters or designs. As a rule the practice of forming with the pen good German text or other ornamental letters is of more practical advantage than the making of fancy birds or animals. Ornamental letters are often used in the titles to documents or architect's plans. If you do not care to perfect yourself in the use of the pen for ornamental work you may gain considerable amusement by copying designs by what is known as the Transfer Process. This

Penmanship.—*Continued*

has long been known to penmen and pen artists and is frequently used when exact copies are required. It is so simple and easy that a child can make an exact copy of any kind of ornamental pen work or even of outline pictures. It will not teach you how to make the originals and yet it will give you a good idea of how they are made and the kinds of lines that are used.

Any kind of paper that is so thin that lines can be readily seen through it will do, but it is better to secure regular transfer paper which is not only very thin but is so made as to be transparent. Take a sheet of this paper and place it on the picture to be copied. Then with a good lead pencil trace all the outlines and shadings of the entire picture. Do not neglect any line but make a complete and perfect picture on the transfer paper of the original.

Having done this turn your paper over and blacken the whole of the other side of it. You will readily see why this is done. If you attempted to transfer the pencil drawing to white paper the picture, while like the original, would be turned around so that it would face the other way. This is avoided by blackening the whole of the other side of the transfer paper.

When you have done this, place the transfer paper, blackened side down, on your white paper and with a hard, fine-pointed lead pencil trace over all the outlines and shadings of the entire picture. As you do this the lead on the blackened side will mark the impression on the white paper. Thus you will print in pencilings a perfect copy of the original and it will face the same way.

When you have done this it is a very easy matter to finish the picture with a pen and ink. Put the ink on over the pencilings and shade according to the shading of the original. After the ink is on, erase the pencil marks with a rubber. Care should be taken in all these operations to keep the paper from moving so that none of the lines or shades may be misplaced.

If you read these instructions carefully you may sit down and make an exact copy of any outline picture you may wish and do it so nicely and perfectly that you will be surprised at yourself. It is of course not much of an accomplishment and it would be much better for you to learn to make nice originals with your pen. But not everyone has the gift for such work and if you have not, you will find the transfer process will furnish you good profitable amusement and some instruction.

If you are clever with your pen, never put it to anything except good uses. Your gift will delight others as well as yourself if you make pictures which will delight any eye. There have been some wonderful penmen in the world who have put their accomplishment to bad purposes and have suffered accordingly. Once the United States Government detected a counterfeit of a one hundred dollar bill which was so good that it passed through one of the

banks. A few inches away it seemed perfect but a closer examination revealed at once that it was done with a fine steel pen. The penman was arrested and spent a long period of his life in a prison and died poor and miserable. He had a gift which if properly used would have gained him riches and fame. As it was his gift and all the long hours he had spent in training himself only went to make him a miserable outcast. Happiness can come only when your gifts and accomplishments are ever employed in a good purpose.

Penn, John.—(1729-1795.) A grandson of William Penn; proprietary lieut.-gov. of Pa. (1761-73), and gov. (1773-75).

Penn, Richard.—(1736-1811.) A grandson of William Penn, lieut.-gov. of Pa. (1771-73).

Penn, William.—(1644-1718.) A famous Anglo-American Quaker, philanthropist, and statesman. In 1681 he received from Charles II. the grant of the territory that is now Pa. He founded the colony of Pa. and the city which he named Philadelphia. His administration was marked by liberality and wisdom, with special efforts to improve the condition of the negroes and Indians. In 1701 Penn returned for the last time to England, leaving the government in the charge of one Ford, by whose rascality he was financially ruined.

Pennell Joseph.—Born at Philadelphia, 1860. An etcher and illustrator.

Pennsylvania (the "Keystone State").—One of the North Atlantic States of the United States of America. Capital, Harrisburg; principal city, Philadelphia. Pa. has great coal and iron mining industries; it is the leading state in iron manufactures, the third in the production of petroleum. It also has extensive glass, leather, woolen, and cotton manufactures, and is famed for its dairy products. One of the thirteen original states; territorial grant made by Charles II. to William Penn in 1681. Area, 45,215 sq. miles. Pop. (1900), 6,302,115.

Pennsylvania Avenue.—The principal avenue of Washington, D. C.

Penn vs. Baltimore.—This case which was settled in English courts, determined what land was comprised in the land grants to William Penn and to Lord Baltimore, and is practically important in the U. S. because it decided the boundary line between Pa., Md., and Va. The dispute was compromised, and in 1760 the court of chancery confirmed this compromise. The famous Mason and Dixon line, run in 1766, accords with the boundary line thus decreed.

Penobscot.—(1) A river in Me., which flows into Penobscot Bay near Belfast. Length, about 275 miles; navigable to Bangor. (2) An arm of the Atlantic Ocean, at the mouth of the Penobscot River on the south coast of Me.

Pensacola.—(1) A seaport of Fla. It has an important export trade. Pop. (1900), 17,747. (2) An inlet of the Gulf of Mexico on the northwestern coast of Fla. Length, about 30 miles.

Pen, Steel.—The first steel pen was made in 1830.

- Penzance.**—In England, a seaport of Cornwall; a health resort; has fishing industries.
- People's Party, or Populists.**—This political party was definitely organized in Cincinnati, May 19, 1891, at a convention composed of various organizations, chiefly farmers, that had existed for many years. The purposes were the same as those of the convention at Ocala, Fla., in 1890. (See OCALA PLATFORM.) In 1892 the national convention met at Omaha, Neb., and nominated James B. Weaver for president, and James G. Field for vice-president. In 1896 the national convention at St. Louis nominated William J. Bryan (the regular Democratic nominee) for President and Thomas E. Watson for Vice-president. In the election that followed, Bryan received 176 electoral votes and Watson 27. The successful candidates, McKinley and Hobart, Republican, received 271 electoral votes.
- Peoria.**—A commercial city of Ill., situated on the Illinois River. Pop. (1900), 56,100.
- Pepin.**—Died, 838. King of Aquitania, 817-838.
- Pepin, Lake.**—A widening of the Mississippi 40 miles southeast of St. Paul, between Minnesota and Wisconsin.
- Pepin of Heristal.**—Died, 714. Ruler of the Franks.
- Pepper.**—A genus of plants of the natural order *Piperaceæ*, consisting of plants with woody stems, covered with flowers on all sides, and solitary spikes opposite the leaves. The flowers are hermaphrodite. It is a native of the East Indies, but is cultivated extensively in many tropical countries.
- Pepperell, Sir William.**—(1696-1759.) Commander of the provincial army which besieged and captured Louisburg, in 1745.
- Pepys, Samuel.**—(1633-1703.) An English politician whose "Diary," covering the period between 1660 and 1669, is an authority on the Restoration.
- Pequot War.**—A war between the Pequot Indians of Conn. and the settlers (1636-38).
- Perch, The.**—2698.
- Percival.**—See ARTHURIAN LEGEND, 1790.
- Perdido.**—A small river and bay on the western border of Fla., separating it from Ala.
- Periwinkle.**—A genus of gasteropodous mollusks, having a proboscis-shaped head, moderate sized foot and rudimentary siphonal canal. The shell turbinates and has no nacreous lining. It abounds on the British coast and is also common on the coast of New England.
- Permit.**—Written authority to remove dutiable goods.
- Pernambuco.**—Capital and a seaport of the state of Pernambuco, in Brazil. Pop., about 100,000.
- Perpetual Motion, Nearest Approach Ever Made to It in Mechanics.**—An inventor has patented a double electric battery which seems to come exceedingly near to perpetual motion. Instead of using the zinc battery, he professes to have hit upon a solution which makes a battery seven times as powerful as the zinc battery, with absolutely no waste of material. The power of the battery grows gradually less in a few hours of use, but returns to its original unit when allowed to rest a few hours. He has two batteries so arranged that the power is shifted from one to the other every three hours. A little machine has been running for some years in the patent office at New York. Certain parts of the mechanism are constructed of different expansive capacities, and the machine is worked by the expansion and contraction of these under the usual variations of temperature. In the Bodleian Library at Oxford there is an apparatus which has chimed two little bells continuously for forty years, by the energy of an apparently inexhaustible "dry-pile" of very low electrical energy. A church clock in Brussels is wound up by atmospheric expansion induced by the heat of the sun. As long as the sun shines this clock will go till its works wear out. Mr. D. L. Goff, a wealthy American, has in his hall an old-fashioned clock, which, so long as the house is occupied, never runs down. Whenever the front door is opened or closed, the winding arrangements of the clock, which are connected with the door by a rod with gearing attachments, are given a turn, so that the persons leaving and entering the house keep the clock constantly wound up.
- Perry, Mathew Calbraith.**—(1794-1858.) An American naval officer, active in the War of 1812, and in the Mexican War. Appointed commodore in 1841.
- Perry, Oliver Hazard.**—Naval commander; sketch of, 452.
- Perryville (Ky.), Battle of.**—Fought Oct. 8, 1862. A desperate fight between McCook's corps of Buell's army and about an equal force of Confederates under Bragg. The Union army lost 900 killed, 2,900 wounded, and 500 missing. The Confederate loss was about the same.
- Perseus.**—See GREEK AND ROMAN MYTHOLOGY, 1628.
- Persia.**—A country of western Asia, lying between the Caspian Sea on the north and the Arabian Sea on the south, and between Afghanistan on the east and Arabia on the southwest. It rose to greatness under Cyrus about 550 B.C. and continued to be the chief world-power until conquered by Alexander the Great in the 3d century B.C. It again attained to great splendor in the 6th and 7th centuries A.D. under Khusran (Chosroes) I. and II., when it was conquered by the Saracens. The government is now an absolute monarchy, the ruler being called the shah. It has long been noted for the manufacture of carpets, rugs, shawls, laces, and silks. The religion of the state is Moham-medan. Area, 628,000 sq. miles; pop., 9,000,000.
- Persian Wars.**—The wars between the Persians and Greeks, beginning 500, and ending about 449 B.C.
- Persimmon, The.**—2882.
- Personal Liberty Laws.**—Laws passed by many of the northern states to check the fugitive slave laws, particularly the stringent law of 1850. Many of these states secured to the fugitive slaves the right of trial by jury, refused the use of the jails for their detention, and forbade state judges and officers to assist claimants or to issue writs.

Personal Property.—Chattels which consist of things temporary and movable, including all property not of a freehold nature.

Perth —(1) A midland county of Scotland; famous for its scenery and its historical associations. (2) The capital of county of Perth; manufactures cotton goods. James I. was murdered here, 1437.

Perth Amboy.—A seaport and city in Middlesex Co., N. J. Manufactures terra-cotta, fire-bricks, etc. Pop. (1900). 17,699.

Peru—A republic of South America, lying on the Pacific coast a short distance south of the equator. It is traversed by several ranges of the Andes Mts. but contains also plains and plateaus, is rich in mineral wealth, especially gold and silver, as well as agricultural products. Capital, Lima. Area, 449,000 sq. miles; pop., 3,000,000.

Perugino.—3415.

Pestalozzi, Johann Heinrich.—(1746-1827.) A noted Swiss writer and educational reformer.

Peter (originally SIMON).—One of the twelve apostles.

Peter I. Alexeievitch (surnamed "The Great").—(1672-1725.) Czar of Russia. He introduced Western civilization into Russia and made his country one of the great powers of Europe.

Peter II. Alexeievitch.—(1715-1730.) Czar of Russia, 1727-30.

Peter III. Feodorovitch (KARL PETER ULRICH).—(1723-1762.) Czar of Russia. He reigned but a few months.

PETER THE GREAT.—(1672-1725.)

Russia with which we associate the name of Peter the Great, had its origin under Ruric, a Swedish adventurer (862 A.D.), whose dynasty ruled over seven hundred years, and (by a double colonization of the soil and the native) extended authority over adjoining tribes. After the 11th century it suffered from a lack of unity which finally enabled the Tartar hordes of Jenghis Khan to convert it into a province of the Mongol empire and hold its princes in degrading subordination. Muscovy (Moscow), knowing how to turn to advantage the Mongol yoke, secured from the Khan the privilege of collecting tribute from princes of Russia, and—while still subject to the Khan—extended its dominions and strength. Under Ivan the Great, the first "Czar of all the Russias," it annexed Novgorod in 1470, and finally (1480), freed itself from Tartar dominion. Though Russia had become a great power by the end of the Middle Ages, she needed seaports and further expansion before she could make herself felt in the affairs of Europe. She soon began her long-continued efforts to reach a sea free from ice. Under Ivan the Terrible (1533-84) she gained the whole length of the Volga, and made a good beginning on the conquest of Siberia, but she was unsuccessful in her attempts to force her way to the Baltic, and Black seas. From 1580 to 1639, and thereafter, she continued to advance by the work of the Cossack

horsemen, hunters, and freebooters who explored, conquered, and colonized Siberia. With all her vigor, she still lacked organization and greater strength; she still needed the master mind of a strong and able ruler to lift her to the position of one of the great powers of Europe. Such a man she found near the close of the 17th century in the person of Peter the Great of the Polish House of Roman to which has held the Russian throne from 1613 to the present time.

Peter was born at Moscow in June, 1672. As a boy, he was strong, eager, and ambitious. He exhibited traits of character which showed that he might become a remarkable man. He had a nature that was uncoerced. From the beginning of his fierce young life, he tirelessly, fearlessly, and resistlessly made his way to what he desired. He sought what was true or useful everywhere, and profited by it. He was frank, vivacious, hopeful, appreciative, but had a mind that compelled obedience. He received his education mainly from the school of life, and he always sought to school his nation under the masters in every department of work and thought.

On the death of his elder brother in 1682 he came to the throne. For awhile he reigned jointly with a second older brother Ivan, and under the regency of his sister, Sophia. After his coronation he was given lessons in the military art and mathematics by an acquaintance at Strasburg. He next fell under the guidance of Lefort, a Genoese, who instructed him in the sciences and arts of civilization. He had a liking for mechanics, and for military and naval affairs. He arranged sham-battles, with play soldiers, engaged in boat-building, and devised ingenious fire works. By much labor he caused a fort to be built, in order that his young soldiers might be trained in the management of a siege. In the military company which was formed from his attendants, he was subjected to the strictest discipline. He stood his watch in turn, took his share of the duties of the camp, slept in the same tent with his comrades, and partook of the same fare. He passed by regular steps from the lowest to the highest place as commander of his boy-soldiers.

At the age of seventeen he married, by the advice of his mother, but against the wish of his half-sister, whom he asked to resign. In the contest which followed, he finally defeated Sophia, and placed her in a convent, but he was the object of her plots until her death in 1704.

On the death of Ivan, in 1696, he became sole ruler, and devoted his entire time to plans for the strengthening and upbuilding of his country. He soon began to look for ports (besides Archangel on the frozen north) where he could prepare a fleet. In 1696, he besieged and took Azoff. He now invited from Austria, Prussia, and Holland skilled engineers, architects, and artillerymen. He began to construct ships for both an armed and a mercantile navy. He began reforms in the army. He asked the young nobility to travel in other countries and learn

Peter the Great.—*Continued*

what might be most useful in the civilization and advancement of Russia, and to take special notice in matters of shipbuilding and naval equipment. He sent some to Germany to study the military art.

Desiring to see the countries that had made the greatest advance in civilization, and that had developed most in the military art, science, and industry, in 1697, he left his government in the hands of a prince and a council of three, and as an inferior officer of an embassy of which Lefort was the head, he visited some of the Baltic provinces. Arriving at Zaandam, Holland, he disguised himself and hired as a common laborer to a shipbuilder. He flew about with much energy, in doing his work. He was very inquisitive, trying to understand all he saw. To escape the annoyance of the crowd, he left Zaandam for Amsterdam, where he saw the construction of a ship from the beginning. He worked here for four months being known as Master Peter. When he was fully established in Holland he wrote back to a friend about what he was learning. He said: "What we do is not for any need, but for the sake of learning navigation, so that having mastered it thoroughly, we can, when we return, be victorious over the enemies of Jesus Christ, and liberators of the Christians who live under them which I shall not cease to work for until my latest breath." He also gave his mind to other lines of learning. He attended lectures on anatomy and surgery. He learned how to pull teeth. He inspected factories, printing-presses, flour-mills, and paper-mills. Wherever he thought he could gain some useful knowledge, there he went. He visited hospitals, cabinets, museums. He finally became familiar with fourteen trades.

He visited England and was royally entertained by William III., who had already presented him with a yacht, fully armed. He studied England's naval establishment and was delighted with a show sea fight, arranged for his pleasure by William. He made a careful study of English institutions. He would not go into the Parliament, but he is said to have viewed that body through a hole in the ceiling. Having studied and labored in England four months, and engaged engineers for his own work, he went to Vienna where he studied military tactics and learned much of value in forming his own armies.

He soon hurried back to Moscow to help suppress a revolt. He crushed it with a firm hand, executing nearly all of those who had been engaged in it. Suspecting that his wife had been opposing his reform policy, for Europeanizing Russia, he divorced her and shut her up in a convent. Soon after a second revolt he disbanded all of the regiments of his army, and replaced them by troops trained according to Western European tactics.

He soon began a series of reforms. He abolished the Russian long-skirted robe with its

long sleeves. To induce his people to keep a shaven face, he placed a tax on beards. He is said to have cut off the sleeves and beard of his reluctant courtiers, and stationed barbers and tailors at the gates of Moscow to cut off the beard and skirts of all who had not conformed to his orders. He reformed the Russian calendar, adopted a new coinage, built factories, roads, and canals, established military and naval schools, encouraged the translation and publication of good works of foreign authors, raised revenue by the taxation of goods in common use, permitted trade with foreign countries. He also framed laws after those of Europe. He reformed the government of cities so that the people were given some voice in the management of affairs.

In 1700, he joined Poland and Denmark against Sweden, taking advantage of the youth of Charles XII. Though he was defeated at Narva, he continued his plans with great energy. In 1703, while making himself master of the Swedish lands on the Baltic, he laid the foundations of St. Petersburg. By his great energy and strong will, he succeeded in transforming a swamp into a beautiful city. In order to get sufficient materials he ordered every cart entering the city and every ship visiting the port to bring a portion of stone, brick, or gravel.

In 1709, he won the battle of Pultowa, against Charles XII., who became a fugitive in Turkey. In 1711, he made an unsuccessful campaign in Turkey, which ended in the loss of Azoff; but in 1713, he made himself master of much of the Swedish coast.

In 1716, he went on another European tour, in company with his second wife, Catharine—a country girl with whom he had fallen in love before he sent his first wife to a convent. On his return in 1718, he laid a hand of control upon his rebellious son, Alexis, who had allied himself with the opposition party, and who was finally sentenced to death for treason.

In 1721, he concluded a peace with Sweden, by which Russia acquired Livonia, Esthonia, Ingria, Carelia, Vibory and the adjacent islands. In 1722, making the massacre of some Russians a pretext for war against Persia, he sailed down the Volga and seized three provinces which gave him entire control of the Caspian Sea.

Returning to his capital, he spent his last days in making further improvement and in spreading learning among his people. In 1724, by exposure, while inspecting the works on Lake Ladoga and while rescuing some sailors from the Gulf of Finland, he further weakened a constitution that had long been declining prematurely under continual excitement and great labor.

He left, for his monument, Russia, which he had given six provinces, an outlet upon two seas, a regular, well-trained army, a fleet, a naval academy, art galleries, and libraries. Though a rough man, and a despotic monarch, he wished to rule well. Though he forced his people to change their customs and habits, he

Peter, The Great.—*Continued*

raised his country to a higher civilization and introduced Western ideas which tended to advance popular liberty.

Peters, Christian Henry Frederick.—(1813-1890.) A German-American astronomer; discoverer of over 40 asteroids.

Petersburg (Va.) Siege of.—Petersburg is situated 22 miles southeast of Richmond and in the Civil War it was strongly fortified, being one of the defenses of that city. Beginning with June 16, 1864, the Federal forces under Grant made several unsuccessful assaults upon it and finally settled down to a regular siege. On July 30 an enormous mine with 8,000 pounds of powder was sprung, making a large breach called the crater. The attack that followed was repulsed with heavy loss. Final operations against the fortifications were begun Mar. 25, 1865. Sheridan's victory, Apr. 1, at Five Forks rendered the position of Petersburg untenable, and the Federal troops captured it Apr. 3. This capture sealed the fate of Richmond.

Petition.—The Constitution secures to the people of the U. S. the right of petition for the redress of grievances. But from 1790 to 1836 Congress persistently ignored the petitions in reference to the abolition of slavery, and in the latter year enacted that "all petitions, memorials, resolutions, propositions, or papers relating in any way to the subject of slavery or the abolition of slavery shall, without being printed or referred, be laid on the table, and no further action shall be taken thereon." This action brought out John Quincy Adams as the champion of the right of petition, who for 10 years opposed the so-called "gag rules" until he secured their repeal. The rules of Congress now require that petitions shall be entered on the journal by the clerk and submitted to the proper committee, and a notice of their introduction shall appear in the Congressional Record. (See JOHN QUINCY ADAMS.)

Pet of the Regiment, The.—See ANIMAL STORIES, 2739.

Petrarch, Francesco.—(1304-1374.) Italy's greatest lyric poet.

Petrie, W. M. Flinders.—(1853-.) An English Egyptologist.

PETROLEUM AND ITS PRODUCTS.—

The first settlers who pushed across the Allegheny Mountains to make their homes in western Pennsylvania, and eastern Ohio noticed that a peculiar kind of oil flowed with the water from many of the springs of that region. This oil spread over the water in the brooks and creeks and made it glisten in the sunshine with all the colors of the rainbow. On some of the streams oil was present in considerable quantities, and one stream that emptied into the Allegheny River was given the name of Oil Creek, because it bore on its surface such a heavy coating of oil. Years afterward, a town was built upon the banks of this stream and was called Oil City.

The oil of the springs was *petroleum*, a name meaning *rock oil*. It is a thick black substance, which looks a little like molasses. It smears whatever it touches, is easily set on fire, and smells of coal gas. At first, owing to its odor and the fact that it was supposed to have some relation to coal, it was called *coal oil*. Though petroleum is spoken of as an oil, it is in fact a compound of several oils and other substances. Not less than a dozen useful substances are derived from it, and of these we shall learn more presently.

Petroleum is found in beds of rock from 100 to 1,000 feet below the surface. The oil-rock is usually a hardened bed of gravel or sand lying between two veins of shale, which is another name for slate or soapstone. The rock forms layers, varying in thickness from a few inches to 125 feet and the pores of the rock are full of petroleum. The slate rock above and below the oilbearing rock will not allow the oil to pass through, and it is held fast in the pores of the rock, as if in a great bottle. In order to obtain the oil, wells are drilled through the layers of shale that lie about the oil and form the upper side of the bottle and the oil is taken out.

The machinery for sinking an oil well is quite simple, and was borrowed from the older practice of making salt wells. First, a strong wooden framework about 60 feet high is built. This framework is generally 20 feet square at the bottom and five feet square at the top. Heavy posts form the four corners, and there are side pieces, every few feet, with braces across, to make the framework strong. This is called the derrick, and it is used for taking out and replacing the drill while the well is being made.

The floor of the derrick is made of planks, and in the center there is a hole 10 inches across. This is the top of the well. Some distance away is the engine shed containing a steam engine to furnish power for sinking the well and afterward for pumping up the oil. A long piece of wood reaches from the engine shed to the center of the derrick floor. This piece of wood is a heavy beam, thick in the middle and smaller at the ends. Near its middle this wooden beam is pierced by a round bar of iron, the ends of which project six inches on each side of the beam. The iron bar is supported upon a frame high enough to allow the beam to move up and down like a seesaw. One end of the beam is fastened to the engine-crank, and as it turns the other end plays up and down over the top of the well. On account of its motion the beam is named a *walking beam*, and the whole apparatus around the well is called the *rig*.

The first step in sinking an oil well is to drive an iron pipe down through the ground to the rock, which is generally about 30 feet below the surface. The pipe is cut in short pieces called *sections*. One of these is placed in the hole in the center of the derrick floor under the

Petroleum and its Products.—Continued

walking beam. Upon the end of the beam has been placed a block of wood like a big mallet, and as the end of the beam moves up and down, this block strikes the pipe and drives it into the ground. When a section of pipe has been driven entirely into the ground, another is placed on top of it and the work proceeds. When the rock is reached the drilling begins.

The *drill* is made of steel in the form of a wedge, and the edge is made sharp so as to cut the stone. The drill is held in a heavy piece of iron called the *bit*. The bit and the drill together are about ten feet long, and are suspended in the well by a rope which passes through a pulley at the top of the derrick and over a reel in the engine shed called a *windlass*. The drill being let down to the rock by the rope, the latter is fastened to the walking beam. By this the drill is raised about 56 inches at each turn of the engine crank and allowed to fall upon the rock. The drill strikes the rock with a force equal to the combined weight of drill and bit. After each stroke the drill is turned slightly and the rope lengthened a little. In this way a hole is cut into the rock at the rate of several feet a day. Every hour, or so, it is necessary to lift out the bit, to replace the drill with another newly sharpened, and to clean out the sand in the hole. The sand is removed by a machine called the *sand pump*. It is a tube that has a valve, like a water pump, which sucks up the sand at the bottom of the hole. After the sand has been removed, the drill is replaced and the work goes on as before.

The men engaged in drilling the well often know the depth at which they may expect to find the oil, and when it has been reached, they say they have "struck ile." After the well has been drilled and the oil has been found the *casing* of the well takes place.

This consists in putting in a pipe with tight joints, which extends to the bottom of the well. The bottom section of this pipe is pierced with small holes through which the oil enters the pipe.

There are two kinds of wells, known as flowing wells and dry wells. In the former the pressure of the oil or gases in the oil basin, or bottle, as we call it, is sufficient to force the oil up to the surface of the ground. The dry well, as it is called, yields oil only when it is pumped to the surface. Many of the wells fail after a time because the supply of oil becomes exhausted. It is then necessary to drill deeper or to abandon the well. The average duration of an oil well has been found to be about five years.

The sinking of wells to obtain petroleum began in 1859. In that year some of the oil from a spring near Titusville, Pa., was sent to Professor Silliman of Yale College, then the most eminent chemist in the United States. Professor Silliman's report upon the sample sent to him was favorable, and a company was formed in New Haven, who sent E. L. Drake to Pennsylvania to purchase lands and drill oil wells.

The first well was drilled by him, and oil was found at a depth of 69 feet. Other wells were sunk soon afterward in the vicinity of the first one and in a short time petroleum became an important product.

One of the chief difficulties that had to be met, by the men who developed the oil industry, was the transportation of the oil from the well to the refinery, where it was made ready for use. The refineries were in Boston, Pittsburg, and Philadelphia. The oil wells were many miles away, in the half-settled counties of western Pennsylvania. There were no railroads connecting the oil regions with these cities and hauling the oil out by horses and mules was slow work. The crude oil had to be shipped down Oil Creek in barrels on flat boats. As the passage could be made only when the water was high after heavy rains, this mode of carrying the oil down stream proved expensive and dangerous; but for a few years the oil was taken to the refineries at Pittsburg in this way. Finally a railroad was built to the wells; great tanks were built in which to store the oil, and it was carried away in barrels as it was wanted. Then the barrels were replaced by steel tanks placed on car wheels and forming oil cars. Finally, iron pipes were laid all the way from the wells to Pittsburg, New York, and other cities. These now carry the oil. There are 6,000 miles of these pipes now in the United States, and they convey every year many thousand barrels of oil from the wells to the places where it is refined.

Refining petroleum is separating the various substances it contains and making them fit for use. This is done by heating the petroleum in closed vessels provided with pipes to carry off the substances of which it is composed. The closed vessels are retorts. With the pipes they are called stills, and the separation of the petroleum into its constituents by heat is termed distilling it.

There are two kinds of distillation, known as distilling *in vacuo* and *cracking*. In the first, the petroleum is distilled in a partial vacuum, that is, the retort has nearly all the air pumped out and then the heat is applied. The second form of distillation is by means of heated steam. The name comes from the cracking sound, as the hot steam comes in contact with the cooler petroleum.

The various substances of which petroleum is composed may all be converted into vapor if sufficiently heated, but some are converted into vapors at quite low temperatures, and others only at very high temperatures. Consequently, when heat is applied to the still and its temperature begins to rise, the various constituents are successively converted into vapors and driven off. By collecting in separate vessels those substances given off at different temperatures we obtain a number of very different products.

The first substance that comes from the retort after distillation begins is a clear liquid

Petroleum and its Products.—*Continued*

called *gasoline*. It is converted into vapor in the retort and is condensed by passing through the pipes of the still, which is cooled with cold water. Gasoline receives its name from its use in making burning gas in small gas machines. It is easily converted into a vapor and by passing air through gasoline a mixture of air and gasoline vapor is formed which burns readily and can be used for fuel or lighting.

The second product from the still is *naphtha*, a liquid closely resembling gasoline, but not so easily converted into a vapor. Consequently it is not so soon given off from the still.

There are three naphthas, called A, B, and C naphtha, which appear one after the other. C naphtha is sometimes called *benzine*.

Kerosene, or lamp oil, is the next substance separated from the petroleum. Kerosene means wax-oil, and the name was applied because of its close relation to paraffin, a kind of wax which is the last substance obtained in refining petroleum. In Europe, kerosene is called paraffin oil, and in this country passes under certain grades known as water white, standard, and prime, names used principally by the manufacturers and dealers to indicate the purity of the oil.

Lubricating oils, of three grades, are next produced from the petroleum still. They are used for oiling machinery and for the manufacture of other lubricants.

The last product is paraffin, which has already been mentioned. The wax from which candles are made is paraffin. The name is derived from two words which means without affinity, and was given to this substance because it resists the action of nearly all chemical agents.

Men are not yet agreed as to the origin of petroleum. Some of them think that it is formed by the distillation of vegetable and animal matter, by the heat beneath the surface of the earth. This view of the origin of petroleum is the one that is most generally held. A few chemists think that petroleum is formed by the action of water on certain heated minerals.

Pets, Keeping of.—2308.



- The Canary, 2308.
- The Parrot, 2312.
- The Cockatoo, 2313.
- The Pigeon, 2314.
- The Cat, 2314.
- The Dog, 2316.
- Training the Dog, 2318.
- The Rabbit, 2324.
- Monkeys and Rodents, 2325.

Pettaquamscut Purchases.—In 1660 a tract of land, now Washington Co., R. I., adjoining Pettaquamscut Rock, was purchased of the Indians independently by two separate companies. The conflicting claims ultimately involved R. I. and Conn. in a dispute that lasted 50 years.

Pettie, John.—(1839-1893.) A noted British painter.

Pewee, The.—See FLYCATCHER, 2587.

Pharaoh.—A title given to the Egyptian kings.

Pharisees.—An ancient Hebrew sect which was particularly exact in its interpretation of the law.

Pharsalia.—(1) An epic poem by Lucan in ten books, on the civil war between Pompey and Cæsar. (2) In ancient Greece, a district of Thessaly.

Pheasant, The.—2514.

Phelps, Edward John.—(1822-1900.) A jurist and diplomatist; professor of law at Yale, in 1881; U. S. minister to Great Britain (1885-89).

Phelps, William Walter.—(1839-1894.) An American politician. U. S. minister to Austria (1881-82); minister to Germany (1889-93).

Phenicia.—A border of land on the coast of southern Syria, between Mount Lebanon and the Mediterranean Sea; about 200 miles in length; area, about 41,000 sq. miles.

Phenix, or Phoenix.—A marvelous bird of ancient Oriental mythology, which died upon a funeral pile of its own building and arose from the ashes with renewed youth.

Phidias.—3548.

Philadelphia.—(1) The largest city of Pennsylvania, called "the City of Brotherly Love"; founded by William Penn, and was the home of Benjamin Franklin; the Continental Congress met here, in 1774. Philadelphia is the second manufacturing city of the country. Pop. (1900), 1,293,697. (2) In ancient geography, a city of Lydia, Asia Minor.

Philadelphia, Occupation of.—Gen. Howe in charge of the British forces entered Germantown (Pa.), Sept. 25, 1777, and on the following day sent Gen. Cornwallis to occupy Philadelphia. This was achieved without fighting.

Philadelphia, The.—See DECATUR, STEPHEN, 153-156.

Philbrick, John Dudley.—(1818-1886.) An American educator; founder of the Quincy system of instruction.

Philip.—One of the twelve apostles of whom nothing is known after The Ascension.

Philip II.—(382-336 B.C.) King of Macedon; father of Alexander the Great.

Phillip III.—Assassinated, 317 B.C. Illegitimate son of Philip II. Made king of Macedon 323.

Phillip IV.—King of Macedon, son of Cassander. Reigned for a few months only, 297 B.C.

Phillip V.—(237-179.) Son of Demetrius II. King of Macedon 220-179 B.C.

Phillip I.—(1053-1108.) King of France 1060-1108.

Phillip II, Augustus.—(1165-1223.) King of France. Succeeded his father Louis VII. in 1180. He banished the Jews; took part in the third Crusade with Richard the Lion-Hearted, 1190; conquered Normandy, Anjou, Maine, Poitou, and Touraine, 1202-05.

Phillip III., "The Bold."—(1245-1285.) King of France. Succeeded his father, Louis IX., 1270.

Phillip IV., "The Fair."—(1268-1314.) King of France, 1285-1314.

Phillip V., "The Tall."—(1293-1322.) King of France, 1316-22.

Phillip VI.—(1293-1350.) King of France, 1328-50.

- Philip I.**, "The Handsome."—(1478-1506.) King of the Netherlands, 1482; king of Castile, 1504. Father of Charles I. and Ferdiuand I.
- Philip II.**—(1527-1598.) King of Spain, 1556-98. (See ARMADA, THE INVINCIBLE.)
- Philip III.**—(1578-1621.) King of Spain, 1598-1621.
- Philip IV.**—(1605-1665.) King of Spain, 1621-65.
- Philip V.**—(1683-1746.) King of Spain, 1700-24.
- Philip** (MARCUS JULIUS PHILIPPUS), "The Arabian."—Roman emperor, 244-249.
- Philip**, "The Bold."—(1342-1404.) Duke of Burgundy. Obtained the duchy of Burgundy, 1363.
- Philip**, "The Good."—(1396-1467.) Duke of Burgundy, son of John the Fearless, whom he succeeded 1419.
- Philip**, "The Magnanimous."—(1504-1567.) Landgrave of Hesse, 1509-67.
- Philip.**—(1177-1208.) Duke of Swabia.
- Philip, John Woodward.**—Born at Kinderhook, N. Y., 1840. An American naval officer.
- Philip, King** (originally METACOMET).—Killed at Mount Hope, R. I., 1676. A noted Indian chief, son of Massasoit.
- Philippi.**—A city of ancient Macedonia. A Christian church was founded here by St. Paul to which he addressed his Epistle to the Philippians.
- Philippics.**—Nine orations by Demosthenes directed against Philip of Macedon. The name is also given to a series of orations by Cicero against Mark Antony delivered 44-43 B.C.

PHILIPPINE ISLANDS.—

An important group of islands in the great archipelago southeast of Asia. They lie between the China Sea and the Pacific Ocean, a little south of Formosa and north of the Dutch East Indies, and extend about 1,000 miles north and south and 600 miles east and west. The number of islands, while not definitely known, is variously estimated at from 1,200 to 2,000, some of which have never been explored. Many of them are very small and uninhabited. New ones are continually being added to the maps. The principal island is Luzon, on which is the city of Manila; the second largest is Mindanao. All the coast lines are cut into many bays, gulfs, isthmuses, and peninsulas. The whole surface is mountainous, the only plains being alluvial districts at the river mouths, and the spaces left by the intersection of the mountain ranges. The general trend of the principal ranges is north and south, with a certain deflection east or west, as the case may be, so that the orographic diagram of the archipelago as a whole bears a resemblance to a fan, with northern Luzon as its center of radiation. The highest peak, Apo, in Mindanao, is over 9,000 ft. high. The region is volcanic and active craters are numerous; earthquakes are consequently frequent and violent. In 1627 a high mountain disappeared and in 1675 a great plain emerged from the sea as results of these convulsions. Disturbances of this kind in 1863 and 1880 caused great destruction of property, especially in Manila. The theory of scientists is that the

Philippines once formed part of a vast continent, in which the Polynesian Islands, New Zealand, and the Ladrone and Sandwich Islands were also included. Under the Spanish Government the islands were closed to foreign commerce, and little is therefore known of the numerous good harbors they contain. The Bay of Manila is one of the finest harbors in the world, with its 120 miles of circumference and its practical freedom from dangers to navigation.

A variety of climate is to be found in the Philippines, on account of the extreme length of the group from north to south, but the general characteristics are tropical. In the region of Manila the hottest season is from March to June, the greatest heat being in May, before the rains set in, when the maximum temperature ranges from 80° to 100° in the shade. The coolest weather is in Dec. and Jan., when the temperature falls at night to 60° or 65° and seldom rises in the day above 75°. From Nov. to Feb. the sky is bright, the atmosphere dry and cool, and the weather in every way delightful. The gales of the Philippines occur chiefly in the northern islands, coming from the northward. Typhoons have their origin to the east or southeast of the Philippines, whence their general course is westward. They occur in all months, but most frequently about the time of the equinoxes. The population has been estimated at 8,000,000, the bulk of which is of Malay origin. There is little record of their early history and they have few traditions. They are skilled in weaving cotton and silk, and they tan leather and make rude wagons. Although the soil is extremely fertile, agriculture is almost wholly undeveloped. The islands are very rich in useful vegetation. Valuable woods such as ebony, cedar, ironwood, sapanwood, and logwood; gum trees; cocoa palms of which trunk, branches, leaves, fruit, shell, and husk all have their use; bamboo and areca palm; banana and malave woods, which resist the destructive action of water for centuries; plants of medicinal virtue, mangoes, plantains, jack fruits, and the Malayan fruits,—all these are abundant. Rice is a staple food but the crop is often insufficient for the demand. In the higher districts potatoes, peas, and even wheat are raised. The most useful of the animals are the deer, the buffalo,—which is the beast of burden,—and the wild horse, small but sturdy and strong. The bull, of Spanish origin, is found wild. Monkeys, mountain cats, huge and deadly reptiles, many species of tropical birds, sharks, and alligators are plentiful. Gold, rich deposits of copper, galena and zinc blendes, and sulphur are found. Iron ore is abundant, but on account of the lack of means of transportation and machinery, it has so far been cheaper to depend upon importation.

It was not until 1809 that the first English firm obtained permission from Spain to establish a business house in Manila, and only since 1834 has there been sufficient freedom of inter-

Philippine Islands.—*Continued*

course and introduction of foreign capital to materially effect the development of natural resources. Lack of facilities for transportation hinders internal commerce as well as foreign trade. The only railroad, 123 miles in length, connects Manila with the rice-growing districts. The chief exports are tobacco, manila, hemp, sugar, coffee, and cacao; the imports are chiefly rice, flour, dress goods, wines, coal, and petroleum. A variety of textile fabrics, hats, mats, baskets, ropes, and coarse pottery are manufactured. The Philippines were discovered by Magellan in 1521, and from that year until 1542 several attempts were made by Spain to take possession of the islands, but all failed. In 1564 an expedition commanded by Miguel de Legaspi established a footing in Cebu. The group then received its name in honor of Philip II. of Spain. Headquarters were later transferred to Luzon, and in 1571 the city of Manila was founded. These islands were, in many respects, Spain's most valuable possessions. The Portuguese, Dutch, and Chinese made various unsuccessful attempts to drive out the Spaniards. In 1762 Manila was captured by the English and held for a ransom of £1,000,000. This was never paid and the conquered territory was finally returned to Spain. The government of the Philippines was administered by a Council of State at Madrid, which had in charge the interests of the colony and acted as advisory board to the minister for the colony, and by a governor-general at Manila. The Roman Catholic was the established church, and the various religious orders—Dominicans, Augustines, Franciscans, etc.—were the real rulers of the country, as their power among the natives far exceeded that of the civil and military authorities. This influence was the cause of great jealousy and bitter controversies between the latter and the church. Religious affairs and education are far behind the age. Although in nearly every town and village under the control of the Spanish Government a school might be found, the instruction given was poor in both quality and quantity. The treaty of peace at the close of the Spanish-American War provided for the cession of the entire Philippine group to the U. S., on payment of \$20,000,000 by the latter, and these terms were complied with by both governments. Many of the inhabitants of the archipelago desired independence and under the leadership of Aguinaldo, rebelled against the authority of the U. S. The latter found it necessary to send to the Philippines more than 60,000 soldiers, regulars and volunteers, to suppress the insurrection. For nearly three years a desultory war was conducted, resulting in considerable losses on both sides. The Filipinos, as the natives are called, conducted a guerrilla warfare, the hostiles being divided into bands which found refuge in the swamps and among the mountains, whence they sallied forth to harass bodies of U. S. troops. The service of the latter

was very severe and onerous and many of the soldiers died from diseases incident to climatic conditions to which they were unaccustomed. The capture of Aguinaldo (see AGUINALDO) early in 1901, was followed by the surrender of many of the insurgent leaders. Civil governments are being established under the direction of a commission appointed by the President, American capital is seeking investment there, schools are rapidly being established with teachers from the U. S., missionaries of all denominations are sowing gospel seed on the islands, and there is every reason to believe that a wondrous change will be wrought by the civilization of the 20th century. (For glossary of Philippine words see WORDS AND PHRASES OF FOREIGN LANGUAGES.)

Philistines.—A Semetic (?) nation dwelling in Philistia. Their greatest power was attained during the reigns of Saul and David.

Phillips, Adelaide.—(1833-1882.) An American contralto singer.

Phillips, John.—(1719-1795.) A merchant, founder of Phillips Academy in Exeter, and one of the founders of Phillips Academy in Andover.

Phillips, Samuel.—(1751-1802.) An American politician, judge, and merchant.

Phillips, Wendell.—Orator and philanthropist; sketch of, 457.

Phillipsburg.—A city in N. J., on the Delaware River. Pop. (1900), 10,052.

Philosophers' Stone.—An error of ancient science through which it was believed that there was a substance which could convert all base metals into gold.

Phœbe, The.—See FLYCATCHER, 2586.

Phœnician Mythology.—1597.

Phœnix.—In Greek mythology, the ancestor of the Phœnicians.

Phœnix.—The capital of Arizona. Pop. (1900), 5,544.

Phœnix, John.—The pseudonym of George Horatio Derby. He was a well-known humorist.

Phœnixville.—A borough in the township of Schuylkill, Chester Co., Pa., noted for its iron works. Pop. (1900), 9,196.

Phosphorus.—Although never found naturally in an uncombined state, phosphorus is one of the most widely distributed of elements. The majority of minerals composing the earth's crust contain some proportion, be it ever so small, of phosphorus compounds, and these, on the disintegration of the rocks, find their way into the soil to whose fertility they are essential. No plants, it is found, will grow satisfactorily in the absence of phosphorus; and the substance is equally necessary to the development of animal life, being found in the blood and soft tissues, as well as in the bones, whose rigidity is due to the presence of phosphate of lime. Bone ash, indeed, is the chief commercial source of the common phosphorus which comes into the market as a yellowish waxy looking solid. This yellow phosphorus is very inflammable, and must be handled with the greatest caution as it is easily ignited at ordinary temperatures by mere friction, causing dangerous burns. Ex-

posed to the air it undergoes slow combustion and appears faintly luminous, emitting poisonous fumes with a garlicky odor. Heated to about 240° C. out of contact with air, yellow phosphorus is converted into a chocolate red modification which is neither luminous nor poisonous, though chemically unaltered. Common phosphorus is very poisonous, less than two grains have proved fatal, and sets up gastric disorders, jaundice, paralysis, and delirium. A copper sulphate emetic, and Freuch oil of turpentine are useful antidotes. In the manufacture of phosphorus, largely carried on under water, there is apparently little danger to health; but the fumes of phosphorus used in match-making are most injurious to the workers, causing the bone disease known as "phossy jaw." The symptoms rarely appear until the worker has been engaged in the industry for some time; and the medical officer to the Marseilles match factories describes a species of chronic phosphorism in which the workers become so impregnated with phosphorus that the peculiar odor hangs about them and escapes with their breath. With the red phosphorus used for safety matches none of these risks are run.

Phosphorus.—(1) In Greek legend the morning star; the name of the planet Venus when seen at early dawn. (2) In Arthurian legend, a name given to Sir Persaunt of India. In Tennyson's "Gareth and Lynette" he is called Morning Star.

Photographer and His Art, The.—5172.

Photographs Taken under Water.—Photographs under water have been successfully taken on several occasions. The Prince of Monaco has obtained very successful negatives of the ocean bed under electric illumination, and his yacht, the "Princess Alice," is furnished with a complete photographic equipment and laboratory. A submarine observatory in which photographs can be taken, exists at Naples, constructed by Signor Toselli. It is a steel chamber with plate-glass floors, and a collapsing float to sink it to different depths. It can accommodate eight persons, and is illuminated by electric light. Two Scotch photographers have devised an apparatus for taking photographs under water, and have produced several submarine pictures of the bottom of the sea in the Firth of Clyde, near Gourrock. M. Louis Boutan has succeeded in taking submarine photographs under various conditions. A camera constructed for several successive exposures was inclosed in a metal box provided with plane-parallel glass windows mounted in copper rings. The apparatus was fixed on a heavy stand provided with weights, so as to give it a steady footing on the sea bottom. Near the shore, in shallow water, the camera could be placed in position without the necessity of the observer entering the water, and negatives were obtained by direct sunlight in about ten minutes. With an exposure of thirty minutes, negatives could be obtained at the greatest depth ever reached by a diver.



Photography.—2155.

The Camera, 2155
The Lens, 2155.
Compositioun, 2155.
Exposure, 2156.
Development, 2161.
Printing, 2166.
Blue-printing, 2166.

Phrygia.—An ancient country of Asia Minor, comprising, in the Persian period, Lesser Phrygia on the Hellespont, and Great Phrygia in the interior.

Physical Geography.—

Sun, Moon, and Stars, 2965.
The Celestial Sphere, 2966.
The Pole Star, 2967.
The Dipper, 2967.
Measurement of Angles, 2968.
The Zenith, 2969.
The Nadir, 2969.
The Celestial Horizon, 2969
Vertical Circles, 2969.
Meridian, 2969.
The Earth, 2969.
Planets, 2970.
Orbits, 2970.
Satellites, 2970.
Shape of the Earth, 2970.
Gravitation, 2970.
Day and Night, 2971.
Difference of Time, 2971.
Standard Time, 2972.
Mean Solar Day, 2972.
Sidereal Time, 2972.
Vernal Equinox, 2972.
Fall Equinox, 2973.
The Shortest Day, 2973.
The Longest Day, 2973.
The Seasons, 2973.
The Zodiac, 2974.
Summer and Winter Solstices, 2975.
The Tides, 2977.
The Sun, 2979.
The Photosphere, 2979.
Spots on the Sun, 2980.
The Chromosphere, 2980.
The Spectroscope, 2981.
The Corona, 2981.
Nucleus, 2981.
The Sun's Heat, 2981.

- The Sun's Distance, 2981.
 The Moon, 2983.
 Phases of the Moon, 2984.
 The Lunar Month, 2985.
 The Moon's Distance, 2986.
 The Moon's Surface, 2986.
 Eclipses, 2988.
 The Planets, 2989.
 Comets and Meteors, 2992.
 The Star Clock, 2993.
 The Twelve Constellations, 3000.
- Physical Training.**—1821.
 Exercise for Arms and Shoulders, 1821.
 " " Neck, 1822.
 " " Trunk, 1822.
 " " Legs, 1822.
 " " Arms, Trunk, and Legs in Combination, 1823.
 Grasshopper Jumps, 1824.
 Running on Place, 1824.
 Exercises for Abdomen, 1824.
 Breathing Exercises, 1826.
 Indian Clubs, 1826.
 The Wooden Dumb-bell, 1828.
 Chest Weights, 1830.
 The Wand, 1832.
 Swimming, 1835.
 Exercises with Chairs, 1837.
 Horizontal Bar, 1838.
 Pair of Rings, 1840.
 Double Inclined Poles, 1841.
 Inclined Ladder, 1843.
 Vertical Pole or Rope, 1844.
- Physical Training, Educational Value of.**—1817.
Physician, The Family.—1073.
Physick, Phillip Syng.—(1768-1837.) A surgeon and physician, sometimes called "The Father of American Surgery."
Physiology and Pathology of Childhood, 1040.
Piatt, Donn.—(1819-1891.) An American journalist.
Pickens, Andrew.—Born at Paxton, Bucks Co., Pa. 1739; died in Pendleton district, 1817. A Revolutionary general. He was a partisan commander in S. C. (1779-81); served with distinction at Cowpens in 1781; and captured Augusta Ga., in 1781.
Pickens, Francis Wilkinson.—(1805-1869.) A Democratic politician, grandson of Andrew Pickens. He was a member of Congress from S. C. (1834-43); U. S. minister to Russia (1858-60); governor of S. C. (1861-62); was prominent as a Secessionist leader at the beginning of the Civil War.
Pickens, Israel.—(1780-1827.) A politician. Democratic member of Congress from N. C. (1811-17) gov. of Ala. (1821-25); U. S. senator 1826.
Pickerel, The.—See PIKE, 2693.
Pickering, Charles.—(1805-1878.) A naturalist grandson of Timothy Pickering. His works include "Races of Man and Their Geographical Distribution," "Geographical Distribution of Animals and Man," "Geographical Distribution of Plants."
Pickering, Edward Charles.—Born at Boston, 1846. An astronomer and physicist, great grandson of Timothy Pickering. He was graduated from Harvard in 1865; was professor of physics at the Mass. Institute of Technology (1868-77), has been professor of astronomy and geodesy, and director of the observatory at Harvard since 1876; has published "Elements of Physical Manipulation," etc.
Pickering, John.—(1777-1846.) A philologist son of Timothy Pickering. His works include "Vocabulary of Americanisms" a Greek English lexicon, "Remarks on the Indian Languages of North America," etc.
Pickering, Timothy.—Born at Salem, Mass., 1745; died there, 1829. A statesman and soldier in the Revolutionary War. He was postmaster-general (1791-95); Secretary of War 1795; Secretary of State (1795-1800); Federalist U. S. senator from Mass. (1803-1811); member of Congress from Mass. (1813-17).
Pickett, Albert James.—Born in Anson Co., N. C., 1810; died at Montgomery, Ala., 1858. A historian, author of "A History of Alabama," etc.
Pickett, George Edward.—Born at Richmond, Va., 1825; died at Norfolk, Va., 1875. A Confederate general, celebrated for leading at Gettysburg, Pa., a charge that will ever be famous in history. He was graduated from West Point in 1846 and was at once made a lieutenant, in which capacity he served in the Mexican War: in 1855 he became a captain. Early in 1861 he resigned from the U. S. army and entered the Confederate service, as colonel of a Va. regiment. He displayed conspicuous ability and gallantry and before the end of 1862 he was a maj.-gen. After two days' fighting at Gettysburg, Gen. Lee determined (July 3, 1863) to assail the Union position on Cemetery Ridge by a direct charge, in the hope of breaking the line. Pickett's division, which was composed entirely of Virginia troops, the flower of Lee's army, was selected to make the attempt. The charge was one of the most gallant in the annals of war. Pickett and his soldiers—a forlorn hope—swept across the intervening valley, in the teeth of a murderous fire of artillery and musketry from Cemetery Ridge. The men fell by hundreds, but the gaps were closed and the fast melting column dashed on. Up the ridge the Confederates went, the center of a converging fire from front and flanks. So impetuous was the rush that the Union line was pierced. But Pickett's supports had failed to keep the pace which he had set. Union reinforcements were hurried to the menaced point and the few that remained of the assailants were beaten back. Gen. Pickett, who was in the forefront of the charge, escaped unharméd, but three-fourths of his officers and men, within 30 minutes were killed, wounded, or taken. Of his three brigade commanders, Armistead and Garnett were killed and Kemper was desperately wounded. Thus Lee's supreme effort failed: he gave up the battle, and that night his army started on its return to Va. (See LEE ROBERT E., 358.)
Pickney, Henry Laurens.—Born at Charleston, S. C., 1794; died there, 1863. A politician, journalist, and writer; son of Charles Pickney. He was

- Democratic member of Congress from S. C. (1833-37); founded the Charleston "Mercury" in 1819, and was for a long time its editor.
- Pictured Rocks.**—A group of cliffs in the upper peninsula of Mich. situated on Lake Superior.
- Piedmont Region.**—A name given in several states of the Atlantic Slope to the hilly territory lying east and southeast of the Appalachian chain, as the Piedmont Region of N. C., Ga. etc.
- Pierce, Franklin.**—Fourteenth President; sketch of, 460.
- Pierre.**—A capital of South Dakota, in the center of the state at the union of Bad River with the Missouri. Pop. (1900), 2,306.
- Piers, Sunken.**—4266.
- Pig, The.**—2414.
- Pigeon, The.**—2499.
- Pigeon, The**—See KEEPING OF PETS, 2314.
- "Pig-Iron" Kelley**—A popular nickname of William D. Kelley of Pa., who for nearly 30 years was a member of Congress. He was prominent as an advocate of a protective tariff, particularly on iron and steel.
- Pigunt, The.**—See HICKORY, 2854.
- Pike, Albert.**—Born at Boston, 1809; died at Washington, D. C., 1891. A lawyer and author. He began the practice of law in Arkansas in 1836, and became a counsel for the Indians in their sale of lands to the Federal government, commanded a squadron of Arkansas volunteer cavalry during the Mexican War; was appointed Indian commissioner of the Confederacy; obtained the rank of brig.-gen. in the Confederate army; practised law at Washington from about 1868-80; published "Prose Sketches and Poems," etc.
- Pike, Austin Franklin.**—(1819-1886.) A politician, Republican member of Congress from N. H. (1873-75), and U. S. senator (1883-86).
- Pike, The.**—2692.
- Pike, Zehulon Montgomery.**—Born in N. J., 1779; killed in the assault on York (Toronto), Canada, 1813. A general. As commander of an exploring expedition he visited Pike's Peak (named from him), in 1806; commanded the attack on York in 1813.
- Pike's Peak.**—One of the highest peaks of the Rocky Mountains, situated in Colorado, 70 miles southwest of Denver. Height, 14,147 ft.
- Pilgrim Fathers.**—A name given by William Bradford to certain emigrants, who under the leadership of Bradford, Brewster, Cushman, Carver and Miles Standish, came from England early in the 17th century and founded the colony of Plymouth. Those who arrived in the first three ships were also called "old comers" or "fore fathers." The "Mayflower" was the first to arrive on the American coast (Dec., 1620), and had 108 persons on board. Next came the "Fortune," with 29, in 1621, and she was followed by the "Anne," and "The Little James" in Aug., 1623, bringing 46 persons.
- Pillow, Gideon Johnson.**—Born in Tenn., 1806; died in Ark., 1878. A noted soldier of the U. S. army and afterward of the Confederate army. He served with conspicuous gallantry in the Mexican War as brig.-gen. and maj.-gen., participating in several of the prominent battles. After the war he retired from the army and engaged in the practice of law in Tenn. At the beginning of the Civil War he entered the Confederate service as a brig.-gen. At Fort Donelson (Feb., 1862), he was second in command under Gen. Floyd, when it was decided to give up the struggle. Floyd and Pillow escaped at night, across the Tennessee River, leaving Gen. Buckner to surrender the garrison to Gen. Grant. Pillow was not again prominent in the war.
- Pinchback, Pinckney Benton Stewart.**—Born at Macon, Ga., 1837. A Republican politician, of African descent. He was elected lieut.-gov. of La. in 1871; was acting gov. (1872-73); was elected U. S. senator from La., in 1873, but not seated; was admitted to the bar in 1886.
- Pinckney, Charles.**—(1758-1824.) A politician. He was a member of the Constitutional Convention in 1787; gov. of S. C. (1789-92, 1796-98, and 1806-08); U. S. senator (1798-1801); U. S. minister to Spain (1802-05); member of Congress (1819-21).
- Pinckney, Charles Cotesworth.**—Born at Charleston, S. C., 1746; died there, 1825. A statesman and soldier in the Revolutionary War. He was a member of the Constitutional Convention in 1787; special envoy to France (in the "X. Y. Z. Mission," 1796-97); and unsuccessful Federalist candidate for Vice-president in 1800, and for President (1804-08).
- Pinckney, Thomas.**—Born at Charleston, S. C., 1750; died there, 1828. A statesman and soldier in the Revolutionary War; brother of C. C. Pinckney. He was governor of S. C. (1787-89); U. S. minister to Great Britain (1792-94), and to Spain (1794-96); Federalist candidate for the presidency, 1796; member of Congress from S. C. (1797-1801).
- Pindar.**—(522-443 B.C.) The greatest of the Greek lyric poets.
- Pine, The.**—2817.
- Pineapple, The.** 2885.
- Pine Bluff.**—The capital of Jeff. Co., Ark., on the Arkansas River. It exports cotton. Pop. (1900), 11,496.
- Pine Islands.**—A group of the Florida Keys, situated northeast of Key West.
- Pines, Isle of.**—An island of the West Indies, situated forty miles south of western Cuba. Area, 1,214 sq. miles.

PINES AND THEIR PRODUCTS.—

Southern United States of America produces, in the famous pine trees of that region, what is regarded as the most important timber of commerce. The state of Georgia has given its name to the tree grown extensively within its borders, and no other timber is so largely used in the building of ships, and other structures. The other pines of the South differ somewhat in growth, but all produce famous timber and nearly all of them are productive of spirits of turpentine.

The pines of the South are commonly known as the longleaf, shortleaf, loblolly, and the

Pines and Their Products.—*Continued*

Cuban pines. The first two are the most important. Large forests of the tree spread over great areas of the adaptable sandy bottom lands of the states along the southern Atlantic seaboard and as far west as the Mississippi River. The trees often attain a height of more than 100 feet, and sometimes live for three hundred years.

Owing to the variety of local names given to the trees of the different species there is sometimes much confusion regarding them. The longleaf is the common name of the most noted pine tree, the botanical name of which is *pinus palustris*; *pinus echinata* is known as the shortleaf pine; *pinus taeda* is the loblolly pine, and *pinus heterophylla* is the Cuban pine. The local names for the longleaf pine are: southern yellow, southern pitch, hard, heart, pitch, longleaf yellow, longleaf, longleafed pitch, longstraw, North Carolina pitch, Georgia yellow, Georgia heart, Georgia longleafed, Georgia pitch, Florida yellow, Florida, Florida longleafed, Texas yellow, and Texas longleafed pine.

The local names for the shortleafed pine in various parts of the South are yellow, North Carolina slash, oldfield, bull, spruce, and rosemary pine.

The loblolly pine is locally known in several states as slash, loblolly, oldfield, rosemary shortleafed, bull, Virginia, sap, meadow, cornstalk, black, foptail, Indian, spruce, bastard, yellow, swamp, and longstraw pine.

The Cuban pine is in some states known as the slash, swamp, bastard, meadow, and the pitch pine.

The longleaf pine varies in color from a dark reddish-yellow to reddish-brown. It produces an abundance of resin. The Cuban pine is of a dark straw color and is also resinous. The shortleafed pine varies from whitish, to reddish, brown in color, and the loblolly is yellowish to reddish, and orange-brown. The wood of the longleaf, and Cuban, pines are about equal in strength, the longleaf excelling, however, in its fine grain and smaller proportion of sapwood.

The heaviest wood in the longleaf, and the Cuban pines is formed between the ages of fifteen and one hundred and twenty years. In the shortest-lived loblolly, and shortleafed pines, the period for the formation of the heaviest wood is between the ages of fifteen and eighty years. The longleaf pine, the largest of all Pine trees, attains a height averaging one hundred feet and a diameter, when fully grown, of between twenty and thirty-six inches, at three or four feet from the ground. Its stout limbs are rarely over twenty feet in length, twisted, gnarled, and sparingly branched.

Besides its timber the pine tree is valuable for the production of what are best known collectively, as naval stores. These include resin, or crude turpentine, spirits of turpentine, rosin, pine, and common pitch. At the begin-

ning of the 20th century, the bulk of these stores used in the world was derived from the longleaf pine, the proportion contributed by France, Austria, and other countries, being insignificant. The crude turpentine is obtained by cutting into the tree at a point about one foot from the ground. A sort of box is formed in the wood when first the bark has been removed, and from a point a few inches above the ground, the liquid, of a pale straw color, exudes and drips down into the box, the capacity of which is about three pints. The best turpentine is obtained during the first year after the tapping of the tree. This is known as "Virgin dip" or "soft white gum." In the following year the product is of a deeper color, and becomes the "yellow dip." With each succeeding year the turpentine becomes poorer in volatile oil. Toward the close of the season, the resin becomes hardened under the influence of a cooler temperature and through the partial evaporation of its volatile constituents. The solidified resin, called hard gum, or scrape, contains only half the quantity of spirits of turpentine obtained from the dip or soft gum. By the distillation of crude turpentine the most important naval stores are obtained.

Spirits of turpentine, or oil of turpentine, is the volatile constituent of the resin. This liquid when freshly prepared is colorless, of a peculiar odor and taste and highly inflammable. It is used in the preparation of varnish and paints, and in the rubber industry, and for other purposes.

Rosin or colophony, is the solid constituent of the crude turpentine, remaining after the distillation of the latter. Rosin is brittle, easily powdered, glossy on surface, almost tasteless, and is used in preparations of common varnishes. It is also combined with tallow for the manufacture of candles and in valuable numerous other ways.

Pine tar is produced by the destructive distillation of the wood itself. It is made chiefly in North Carolina, where the industry has been carried on since earliest colonial times. Small quantities are produced in other sections of the southern pine belt, but mostly for home consumption. In order to extract the tar from the pine-leaf variety, dead limbs and trunks seasoned on the stump, from which the sapwood has been rotted, are cut into suitable billets and piled into a conical stack in a circular pit, lined with clay. The center of the pit communicates by means of a depressed channel with a receptacle—a hole in the ground—at a distance of four feet from the pile of wood. The latter is covered with sod and earth, and is otherwise treated as is a charcoal pit, being fired from apertures at the base, giving only enough draft to maintain slow, smoldering combustion. After the ninth day, the tar begins to flow. This continues for several weeks. It is dipped from the pit into barrels. One cord of "dry" "fat," or light wood furnishes from forty to fifty gallons of tar.

Pines and Their Products.—*Continued*

Tar is much used on the rigging of vessels and in many other ways both on land and on shipboard. The best quality of common pitch is obtained by boiling tar until it has lost about one-third or mere of its weight. To the naval pitch of commerce there is added a certain proportion of rosin of the lowest grade. Pitch is also obtained through the dry distillation of rosin for rosin oil.

Pine Tree Money.—The general court of Mass., May 27, 1652, passed an act establishing a mint in Boston. John Hull was appointed mint master, and the coins manufactured under his supervision were called "Pine Tree Money." from a design on the obverse of a pine tree encircled by a grained ring, with the legend "Masachusetts In." Their coinage was discontinued at Hull's death, Oct. 1, 1683.

Pine-tree State.—The state of Maine; so-called from the pine-tree in its coat of arms.

Ping Pong.—A game, the rules of which are practically those of lawn tennis; it is played on a table divided by a six-inch net, but without courts. The racquet is a small battledore, which in serving must be held below the table; otherwise its movements are unrestricted, save that no volleying is allowed.

The game can be played on a dining-room table of any size; 9 feet by 5 feet is the official measurement, but you can have just as much fun on a table either larger or smaller.

The height of the net is $6\frac{3}{4}$ inches. The height of the table from the floor should be 2 feet 6 inches.

The posts should stand out 5 inches on the outside of the table. The table should be painted dark green, with a $\frac{3}{4}$ -inch white line around the edges. (See **LAWN TENNIS**, 2021.)

RULES

The game is for two players. They shall stand one at each end of the table. The player who first delivers the ball shall be called the server, and the other the striker-out.

At the end of the first game, the striker-out shall become the server, and the server shall become the striker-out, and so on alternately.

The service shall be strictly underhand and delivered from behind the end of the table.

The ball served must drop anywhere on the table-top beyond the net, and is then in play. If it drop into the net or off the table it counts to the striker-out. *There is no second service, as in Lawn Tennis.*

In serving, it is a let if the ball touch the net in passing over.

If the ball in play strikes any object above or round the table before it bounces on the table-top itself (net or post excepted) it counts against the player.

The server wins a stroke if the striker-out fails to return the service, or return the service or ball in play off the table.

The striker-out wins a stroke if the server serve a fault, or fails to return the ball in play,

or return the ball in play so that it falls off the table.

No volleying is allowed; but as long as the ball touches the table-top it is in play, and can be taken at half volley. The striker-out loses a point if he takes the ball on the volley.

On either player winning his first stroke, the score is called 15 for that player; on either player winning his second stroke the score is called 30 for that player; on either player winning his third stroke, the score is called 40 for that player; and the fourth stroke won by either player is scored Game for that player except as below.

If both players have won three strokes (40 all), the score is called deuce; and the next stroke won by either player is scored advantage to that player. If the same player win the next stroke, he wins the Game; if he loses the next stroke the score is again called deuce, and so on, until either player wins the two strokes immediately following the score of deuce, when the Game is scored for that player.

The player who first wins six games wins a set.

The Game may also be scored by points, twenty up. The players, in this case, change the service after every five points scored, like "overs" at Cricket, and they set three at (19 all) the player who first wins three strokes, winning the game. Best of three games count.

Pingree, Hazen S.—An American politician and social reformer. He was governor of Michigan, elected as a Republican, but was noted for his independence of his party; he zealously espoused the cause of the people against the great corporations. He was called "Potato" Pingree on account of his plan, while mayor of Detroit, to assist the poor by giving them the use of unoccupied land within the city limits for the raising of potatoes. He died in London, Eng., June, 1901, while on a European tour with one of his sons.

Pinkham Notch.—A pass in the White Mountains of New Hampshire, leading from the Glen House southward.

Pinkney, Edward Coate.—(1802-1828.) A poet, son of William Pinkney, author of "Rodolph and Other Poems," etc.

Pinkney, William.—(1764-1822.) A lawyer, politician, and diplomatist. He was minister to Great Britain (1806-11); attorney-general (1811-14); member of Congress from Maryland (1815-16); minister to Naples, 1816, to Russia (1816-18), and U. S. Senator (1820-22).

Pins.—Pins date to 1543 in France and were made in England in 1626. Before that time they used thorns and clasps in place of pins.

Pipe-fish, The.—2676.

Pipsissewa Pine, The.—2892.

Piracy.—Robbery on the high seas. According to the law of nations, an indiscriminate preying on the human race, and not a desire to interfere with the prey of some distinct power. The crime is triable in any court, as the high seas are not under the jurisdiction of any one power.

- It is in the international sense of the word a crime against all nations. The difference between a pirate and a privateer is that the former is a sea rover who preys on the vessels and goods of any nation, or who makes descents upon land for purposes of plunder, while a privateer has for his purpose the preying upon the commerce of a hostile nation only. Search of a vessel by a public ship of another state is a war right only, but the right to search on suspicion of piracy exists at all times. The usual penalty for piracy is the confiscation of the vessel and the hanging of the crew, while the penalty for privateering is, at the most, imprisonment. (See PRIVATEERING.)
- Pisano, Andrea.**—(1270-1349.) Noted Italian sculptor.
- Pisano, Giovanni.**—(1240-1320.) Italian architect and sculptor.
- Pisano, Niccola.**—(1205-1278.) Famous Italian sculptor and architect.
- Piscataqua.**—A river in N. H., formed by the union of the Salmon and Cocheco rivers.
- Pisces (The Fishes).**—See CONSTELLATIONS, 3005.
- Pisistratus.**—(605-527 B. C.) An Athenian tyrant.
- Pistole.**—A name formerly given to a gold coin circulated in Spain, Italy, and some parts of Germany. Its value in U. S. currency is \$3.90.
- Pitcairn's Island.**—An island in the southern Pacific discovered in 1767. It is under the protection of New South Wales.
- Pitcher, Molly.**—The wife of a Revolutionary soldier. At the battle of Monmouth she took the place of her husband who was killed while discharging a cannon. Washington rewarded her with a commission as a sergeant.
- Pitcher-plant, The (Wildflowers).**—2898.
- Pitch Pine, The.**—See PINE, 2818.
- Pitkin, Timothy.**—(1766-1847.) A lawyer, politician, and historian. His writings include "Statistical View of the Commerce of the U. S.," "A Political and Civil History of the U. S. from the Year 1763 to the Close of Washington's Administration."
- Pitman, Isaac.**—(1813-1897.) Inventor of "Pitman's system of Phonography."
- Pitt, William.**—(1759-1806.) Celebrated English statesman, sometimes called "The Great Commoner."
- Pittsburg.**—The capital of Allegheny Co., Pa., at the junction of Monongahela and Allegheny rivers. It is the second city in the state and one of the chief manufacturing cities of the country. The principal manufactures are iron, steel, glass, copper, brass, flour, machinery, and petroleum. It exports coal, coke, etc., and is an important railway center. Pop. (1900), 321,616.
- Pittsburg Landing, Battle of.**—See SHILOH, BATTLE OF.
- Pittsfield.**—The capital of Berkshire Co., Mass. It has manufactures of woolen and cotton goods, silks, tacks etc. Pop. (1900), 21,766.
- Pittston.**—A borough in Luzerne Co., Pa., on the Susquehanna River; important as a place of export for anthracite coal. Pop. (1900), 12,566.
- Pizarro, Francisco.**—(1471-1541.) A Spanish soldier. The conqueror of Peru.
- Place de la Bastille.**—A square at the end of Rue St.-Antoine, Paris, which derives its name from the celebrated prison formerly standing there.
- Place de la Concorde.**—A noted square in Paris, formerly called the Place de la Guillotine.
- Piacide, Henry.**—(1799-1870.) A noted American actor.
- Plaice, The.**—See HALIBUT, 2608.
- Planets, The.**—2989.
- Plantagenets.**—A line of English monarchs from Henry II. (1154) to Richard II. (1399). The name is derived from the common broom of Anjou (the *planta genista*), a sprig of which Geoffrey, father of Henry II., used to wear in his helmet. During the rule of the Plantagenets the Commons wrested from the Crown many practical reforms, and received many concessions in the interest of the people. The right of Parliament to inquire into public abuses, and to impeach public counselors, were among the privileges granted at this period.
- Plantain, The.**—See BANANA, 2884.
- Plants.**—2803.
- Plants, Do They Breathe?**—Plants, like animals, breathe the air; plants breathe through their leaves and stems just as animals do by means of their respiratory organs. When a young plant is analyzed it is found to consist chiefly of water, which is all removed from the soil; there is about 75 per cent. or more of this fluid present, and the rest is solid material. Of this latter by far the most abundant constituent is carbon, almost every atom of which is removed from the atmosphere by the vital action of minute bodies contained in the green leaves. The carbon is taken into the plant as carbonic acid gas. Plants also absorb oxygen, hydrogen, and nitrogen from the atmosphere in different quantities through their leaves, and also by means of their roots. These new products stored are in turn used in building up the different organs of the plant. Plants give off used-up moisture through their leaves, just as animals perspire through the pores of their skins. Calculations have been made as to the amount of water thus perspired by plants. The sunflower, only 3½ ft. high, with 5,616 square inches of surface exposed to the air, gives off as much moisture as a man.
- Plassey.**—Once a town in the province of Bengal, which laid the foundation for British supremacy in India.
- Plaster of Paris.**—Native gypsum; so called because found in large quantities in the Tertiary of the Paris basin.
- Plata, Río de la.**—In South America; a large estuary between Uruguay and the Argentine Republic.
- Platæa.**—An ancient Grecian city near Thebes, in the western part of Bœotia.
- Platform.**—The formal statement of the principles of a political party. The first national platform was issued by the friends of Henry Clay in 1832. From 1852 the custom has been adopted by all political parties.
- Platipus, The.**—See MOLE, 2435.

- Platinum.**—One of the "noble metals." It is found only in its native state, usually in small glistening granules of steel-gray color, which contain an admixture of several metals, most of which are rarely found except in association with platinum.
- Plato.**—(429-427 B.C.) Famous Greek philosopher.
- Platt, Charles A.**—Born at New York, 1861; a landscape painter and etcher.
- Platt, Thomas Collier.**—Born at Oswego, N. Y., 1833. A prominent Republican politician.
- Platte, or Nebraska.**—One of the largest tributaries of the Missouri. Total length, 900 miles; not navigable.
- Plattsburg.**—The capital of Clinton Co., N. Y.; situated on Lake Champlain. Pop. (1900), 8,434.
- Plattsburg (N. Y.), Battle of.**—A severe battle fought Sept. 11, 1814, at Plattsburg on the shore of Lake Champlain, near the northeastern corner of N. Y. state. The British general Prevost, with 14,000 veteran troops fresh from the Napoleonic war, engaged the American general Macomb, commanding 3,500. While the fighting was in progress news was received of the American victory in the naval battle of Lake Champlain, which so disorganized the British forces that they fled precipitately. The total loss of Gen. Prevost was 2,000.
- Plattsmouth.**—The capital of Cass Co., Neb. Pop. (1900), 4,964.
- Playfair, Sir Lyon.**—(1819-1898.) A British chemist, statesman, and writer on economics.
- Pleasant Grove (La.), Battle of.**—See SABINE CROSS ROADS, BATTLE OF.
- Pleasant Hill (La.), Battle of.**—A battle of the Civil War, fought April 9, 1864, between Gen. Banks, reinforced by A. J. Smith, and the Confederate forces under Kirby Smith and Taylor. The Confederates were defeated.
- Pleasanton, Alfred.**—(1823-1897.) Maj.-gen. in the Civil War and conspicuous for his bravery and efficiency.
- Pleiads, The.**—See CONSTELLATIONS, 3000.
- Plevna.**—A town in Bulgaria; an important strategic point.
- Plimsoll, Samuel.**—(1824-1898.) An English statesman known as "the sailors' friend." As member of Parliament he secured the passage of the "Merchant Shipping Act," to prevent vessels from going to sea in an unsafe condition. The "Plimsoll's mark" is the mark placed on the outside of the hull of a vessel showing the depth to which it may be loaded.
- Pliny, "The Elder."**—(23-79 A.D.) Celebrated Roman naturalist.
- Pliny, "The Younger."**—(62-113 A.D.) Roman author, nephew of "The Elder" Pliny.
- Plover, The.**—2517.
- Plum, The.**—2873.
- Plumbing Trade, The.**—5168.
- Plumed Knight.**—A name applied to James G. Blaine, used first by R. G. Ingersoll in a speech upholding Blaine's nomination for the presidency.
- Plum Island.**—(1) An island belonging to Mass. lying south of the mouth of the Merrimac River. (2) A small island belonging to N. Y., situated near the eastern entrance to Long Island Sound.
- Plutarch.**—(Between 50 and 100 A.D.) A celebrated Greek historian.
- Pluto.**—1620.
- Plymouth.**—(1) The oldest town of New England. The Pilgrim Fathers landed here, 1620. Pop. (1900), 9,592. (2) The capital of Washington Co., N. C., at the head of Albermarle Sound. (3) A borough in Luzerne Co., Pa., noted for its coal-mining. Pop. (1900), 13,649.
- Plymouth Colony.**—The first settlement in Mass. The Pilgrims, sailing from Plymouth, England, in the "Mayflower," landed at Plymouth Rock, Dec. 21, 1620. The colony became a member of the New England Confederation in 1634, and in 1691 it united with Massachusetts Bay colony.
- Pneumonia**—1089.
- Po.**—The longest river in Italy; it rises in Monte Viso one of the Cottian Alps, and flows into the Adriatic Sea. Length, about 400 miles.
- Pocahontas.**—An Indian princess celebrated in the history of Virginia. Died at Gravesend, England, 1617.
- Poe, Edgar Allan.**—Author; sketch of, 464.
- Poetry and What There Is in America for the Poet.**—5010.
- Poets' Corner.**—A portion of the south transept of Westminster Abbey devoted chiefly to memorials of poets.
- Polinsett, Joel Roberts.**—(1779-1851.) An American politician who filled a number of important offices under the government.
- Point Pelee, or Point Pelée.**—(1) A headland projecting into Lake Erie from the southwestern part of Ontario, Canada. (2) An island in Lake Erie, near Sandusky, a possession of Canada.
- Poison Ivy, The.**—2921.
- Poitiers.**—A city in western France, capital of the department of Vienne. Its Temple of St. Jean (baptistery) dates from the 6th century. Noted for its cathedral and university.
- Poland.**—Formerly a kingdom of Europe, its territory in the 17th century extending from the Baltic on the northwest nearly to the Black sea on the southeast. In 1792, 1793, and 1795 it was partitioned between Russia, Prussia, and Austria. In 1815 the kingdom of Poland was created with Warsaw as its capital. Since 1864 it has been a Russian province. Area of Russian Poland, 49,157 sq. miles. Pop. over 8,000,000.
- Polar Bear, The.**—See BEAR, 2423.
- Pole-cat.**—A quadruped of the weasel family. It is one of the largest of that genus: color deep blackish brown; nose sharp, ears short and round; tail almost equally covered with longish hair.
- Policy.**—The instrument by which a contract of insurance is made.
- Polish Fairy Tales.**—1246.

POLITICAL HISTORY, SYNOPTICAL HEADS FOR

CHAPTER I.

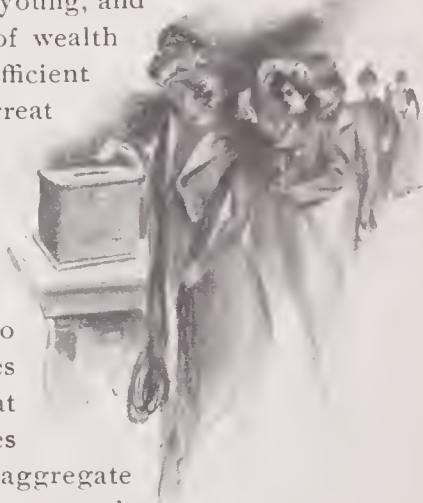
AMERICAN POLITICS "THE MEANEST OF TRADES"—WOMAN'S INTEREST IN POLITICS—WHAT THE TERM POLITICS MEANS—CHRISTIANITY AND SUBJECT MATTER OF MODERN POLITICS—THE COLONIES PRACTICALLY SELF-GOVERNED—THE COVENANT OF THE PILGRIM FATHERS—THE ENGLISH WHIGS AND TORIES—INFLUENCE OF WASHINGTON AND FRANKLIN IN THE REVOLUTION—THE FEDERAL CONSTITUTION—OPPOSITION OF THE ANTI-FEDERALISTS.

POLITICS FOR WOMEN

THE pursuit of the dollar, whether as a means to a comfortable living or to attaining social power and distinction, has been so ardent in the United States that politics, as a serious problem in social life, has been very widely neglected. The standard of educated intelligence in this country is even higher than that in Great Britain, so that, normally, this country should be the field wherein politics should make its largest and finest display. That it is not, is because the country is still very young, and because the present generation is still pioneering in the accumulation of wealth which, when properly distributed, will bring to the front men of sufficient light, and leisure, to give to politics its proper place among the great sciences and arts. England is an old, rich country, nearly if not quite at its zenith, and there, politics becomes the "noblest of professions," while here it yet too largely remains, as it was formerly in the mother country, "the meanest of trades."

But politics, whether an exalted profession or an ignoble calling, we have always with us, working for our collective good or evil. To turn one's back on it is not to escape it, but merely to take the chances of its doing its worst, linked with the hope of weathering the worst that comes. Though it cannot be said that politics bears so directly as does the law, upon every member of the community, it is true that the aggregate effect and result of politics produces a greater average consequence to each member of the community than does the average effect and result of the law, when its aggregate operation is distributed over the whole mass, subject to its jurisdiction. This is to rank politics above the law; a true rating, and one that gives to politics a commanding place in a work designed for women who read, think, and sometimes act. Though but little admitted, as yet, to direct participation in politics, the certainty that the political door will in no great time be flung open to them is assured to women by the upward strides they have made in their legal position, and through the place they have gained in employments and business adventures until recently preëmpted to men.

The chief reason why an intelligent woman should interest herself in politics is the certainty that, in the near future, this country will be busy with the political problems that pass under the generic name of socialism. These comprehend the whole scale of proposed economic changes, from the modest demand that everybody able and willing to toil shall be guaranteed a living wage by the state, to the revolutionary proposal that the state itself shall dissolve, leaving the people to live in primitive communes, wherein each adult and sane man and woman shall follow the individual will, and preserve the general welfare by individual contributions to civic grace and virtue.

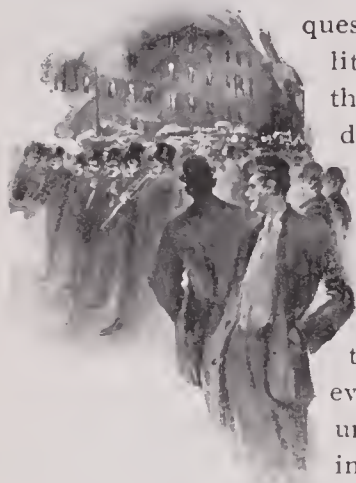


Socialism has so many gradations and phases; its milder projects fit so neatly on to the far edges of our discontent with existing industrial conditions, and our benevolent wish for better times to the working classes, and we have, already, so much practical socialism here and in Europe, in the guise of state-operated railways, telegraphs, post-offices, municipal gas, and water, works, and tram-cars, that we have moved well within the borders of socialism without noticeable change in our political organizations, methods, or phrases. Only those who busy themselves with the philosophical side of politics can realize how close we are to an era of socialistic activity in practical politics, but they feel their knowledge to be sure. There is nothing to dread in the impending struggle. The greatest good to the greatest number is the true end of politics; the judgment of the majority must from time to time decide wherein that greatest good lies, and the past history of our politics warrants the strongest sort of hope that we shall emerge from the contest of socialism in reason and in safety, and without too great a perishing of precious things by the way. But more of our people must meanwhile learn that politics means much else than party names, emblems, and methods; more than the lifting up of this party leader, and the casting down of that one; more than the rotations of ins and outs at the public crib; more than the saturnalia in which the nation indulges itself every fourth year, under the name of a presidential campaign. Should we ever be tempted to think that there is nothing deeper in our politics than that which lies for the moment on the surface, and that is trumpeted in contemporary political speeches, and editorials, we may remember a few past things in our political history, and become the wiser and soberer from our reflections. We may recall the significance, or the effect, of Jefferson's defeat of the federalists in 1800; of the forcing of the reluctant Madison into the second war of liberation, as the price of

his renomination, in 1812; of the Missouri Compromise, of 1820, on the slavery question; of Jackson's fight against the national bank controlled by his political enemies; of the repeal of the Missouri Compromise, in 1854, and the consequent break-up of the Whig party; of Lincoln's defeat of the divided democracy in 1860, followed by a gigantic civil war and by the abolishment of slavery, which had dominated politics for forty years; of the successful struggle of Congress with President Johnson over the reconstruction of the insurgent states, from 1866 to 1869, and of the sound money contest from 1877 to 1899. In all of these, and in many more past and gone political issues, there was involved much more than fireworks, processions, stump speeches, and offices. And so it must ever be in a great and still growing country, where education is free, and universally prized, speech and the press unfettered, where popular feeling really directs public policy, and where the discontented farmer or artisan may, at any time, tumble his real or fancied oppressors down with his secret ballot.

Politics is a term that stands for things we know all about, and yet few of us could give, offhand, a satisfactory exposition of the term. When we look over the field of politics, it seems to embrace so much that one might be excused for despairing of comprehending all within a manageable definition.

One way of getting at what the term politics means is to consider what the thing politics is intended to effect. This, Aristotle told us, more than two thousand years ago, when he described politics as a means of attaining, by collective action, virtue and happiness, for which individual life afforded not the necessary repose and security. In other words, politics is the art of government, and as a government cannot be successfully worked without an understanding of the principles upon which it should be worked, politics embraces also the science of government.



Politics as the science and art of government, had such a long vogue, that its object of attaining the general virtue and happiness had become lost to the common sight when that object was sharply recalled, in 1793, by William Godwin, in his "Inquiry Concerning Political Justice." He accepted Aristotle's definition of the object, but having demonstrated to his own satisfaction that governments everywhere, at every time, had been promotive only of general vice and misery, he proposed to intrust the public virtue and happiness, for the future, to individualism. For many years the book remained nothing more than a perverted classic, dear to political philosophers for its robust honesty, its wealth of example, and its clear, strong intelligence. But in these days it states the case for the peaceful substitution of anarchy for government more powerfully than have, as yet, any of the philosophical anarchists, while it is free of direct responsibility, at least, for such contributions toward the attainment of general virtue and happiness as the assassination of a Russian czar, an American or a French president, and an Italian king. Anarchy seems a far-fetched introduction to a passing review of American politics; yet one must consider that the devotees of the dynamite bomb and the red flag, as parts of political machinery, are numbered in the United States by thousands, and that every public man who rises to prominence by the American method of talking it out with his fellow citizens, is at the daily hazard of his life from the revolver, knife, or bomb, of some anarchist at perpetual war with "authority," in any and every form. Even a woman President in the White House would need her small army of non-uniformed guards; for practical anarchy regards neither sex, age, nor merit.

Before passing from the general to the particular subject, it is worth while to mention two important contributions that Christianity, as a system, though not necessarily as a religion, has made to the subject matter of modern politics. When Aristotle wrote on politics, he was compelled to take his illustrations from the Greek cities, wherein every freeman took a direct part in enacting the laws and was personally addressed by the political leaders. There were factions, but no parties, in those days. There was no representation because each elector was present at the place of action and acted for himself. But Christianity arose, and spent its earlier years within the limits of a widely-extended empire, resting on military force, and being purely despotic on its political side, though there was much civic justice and personal security prevailing. The early Christians were as widely spread as the empire itself. Fraternal love was strong among them — strong enough, in fact, to lead them to struggle to hold together, though they were constantly in danger of separation through doubt and difference touching important matters of faith and government, and because of local departures from primitive usage. Individual opinion, however eminent its source, could make little headway against the uncertainties and tediousness of intercommunication. So it came about that, here and there, parties formed themselves around accepted leaders, and that out of these local units larger parties were gradually formed, having definite issues to present and argue, in the party name and behalf; the party, in the general concerns of the church, thus standing in place of the individuals who had given their allegiance to it. This is the earliest example of organized public opinion, and it is reproduced to-day in the parties through which secular government is carried on among peoples politically free. The conflicts of organized opinion,—that is, of parties,—led to the assembly of councils, general or provincial; and as only a comparative few could attend, or be heard at, these gatherings, or could take part in their legislation, the principle took root that each of the few represented the many who were absent, but in agreement with them. As much of the work of a council consisted in harmonizing diverse wishes and opinions, and as harmony was often possible only by compromise, the representatives were never reduced to the character of mere proxies, but possessed

full liberty of action as to details, so long as they kept to the general sentiment of their constituents. This is just the way in which secular government by representation works to-day in the communities having well developed parliamentary institutions. The enacting clause of any act passed by the New York legislature admirably expresses both the form and the principle of representative government, as handed down the ages from the early Christians; "The People of the state of New York, represented in their Senate and Assembly, do enact as follows." The act is the act of the sovereign people, performed not by proxy or delegation, but by the representation of all in the persons of the chosen few.

When Constantine the Great, in 313 A. D., became the secular patron of Christianity, he knew it to be, from its possession and use of an organized public opinion, and representative government, both already vigorous, the most compact and powerful force within the Roman world. His subsequent laborious and patient dealings with the affairs of the church were designed to win that force to the service of the empire. In this he partly succeeded, and when the empire was gone, the force remained, to invigorate the free political communities of the modern world.

American politics begins, with the charter granted by James I., in 1606, for the settlement of the North American coast. In that charter, he declared for himself, his heirs, and successors, that British subjects who should go and inhabit the intended colonies, their children and posterity, should have and enjoy all the liberties, franchises, and immunities, of British subjects anywhere within the British dominions. At the time, this grant was more important in relation to civil liberty than to political right; but it was an expanding grant that grew with the growth of political franchise at home, and the keen lawyers and constitutionists, with whom the colonies afterward swarmed, gave to the heirs and successors of "Stenie" many a bad quarter of an hour, in picking holes in the Joseph's coat that these teasing dialecticians made out of the grant.

Although eventually some of the colonies belonged directly to the crown, and others to proprietors to whom the crown had made grants, with powers of government, and still others to their inhabitants, with only a general allegiance to the crown, they were all, practically, self-governing colonies. The inhabitants blocked out for themselves the political arrangements that suited their temper and circumstances, and with quiet determination worked those arrangements according to their own pleasure; winding in and out among the legal meshes that nominally held them subject to external government, without breaking a thread or catching a foot in the tangle. A little more than a century after the colonization had fairly begun, Franklin was able to contemplate "near a million English souls" in the colonies, eleven-twelfths of them native born; who had all the government they needed, without an excess; all the distribution of the powers of government necessary to efficiency, without complexity; all possible respect for authority, without adulation of rank or person; public order, with personal freedom; a mastery of all the original obstacles to settlement, whether savage, soil, or climate, and, amid circumstances tending to self-will and self-assertion, a mastery of themselves. The world had never seen the like. The Greek colonies that had gone out east, and west, in ancient times had taken with them comparatively simple local institutions, and had reproduced them in their new homes. But the English who had migrated to, or who had been born in, America, had not reproduced their home institutions. They had taken them as the model, and had remolded them to their own newer and plainer circumstances. To understand their capacity to do this, one would have to read English political history backward to the dawn of parliaments at least. Perhaps it is pleasanter to read forward from the seventeenth to the twentieth century, and to see how, again and again, the like political aptitude has been shown. English speaking men, resolute yet restrained, whether in Europe, Asia, Africa, or America,

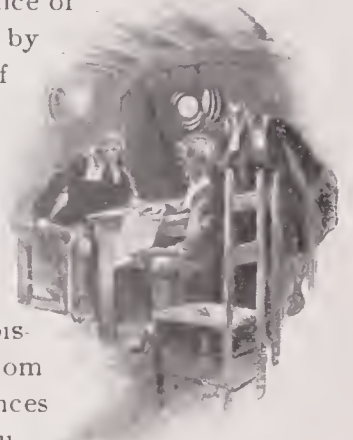
exhibit, as yet, no decline from the then matchless art that planted free political institutions along the American seaboard. In our own country, the far West has been built up into free commonwealths in the same way as was New England, and the Old Dominion, in the colonizing days. That the great West is a broadened out New England, rather than an expanded Old Dominion, is due to the greater migratory habits of the Northern people in the past.

The Puritan cast that New England gave to our national character, during our first century of national existence, is disappearing under the rise of other parts of the Union to a larger importance than had been hitherto attained—the effect of a greater intercourse among the sections, and with the Old World, and the influence of foreign habits and manners brought over by immigrants, or brought in by natives who reside or visit much abroad. Socially, the American types of manhood and womanhood have perceptibly changed within the small compass of the last quarter of a century; but up to date, our political institutions still rest on their original foundations, and show their old-time characteristics of quickness, power, and mobility, in collective action, without any narrowing of that individual freedom, dear alike, in ancient colony days, to Virginia planter and Massachusetts farmer. New England has long since disestablished congregationalism, and Virginia, episcopacy, as parts of the political machinery; but that has broadened freedom and bettered religion. And in place of the little democracies, resemblances of the little democracies of ancient Greece, there came in, with the revolution and the Declaration of Independence, parties of national extent, with national aims, resemblances of that Christian republic that Constantine saw planted within, and conterminous with, his great Roman empire. So that, with the revolution, the national history of American politics fairly begins.

Before entering finally the domain of national politics, a passing mention is due to the famous covenant of the Pilgrim Fathers, drawn up and executed on board the “*Mayflower*,” just before the landing at Plymouth Rock. With a little modernizing and amplification, it would yet serve as a manifesto for a political party or a leader wishing to touch both the hearts and the consciences of the people. It is more important, however, as a statement of the true ends of government and of the true modes of their attainment; and being the earliest American declaration upon these subjects, it will be of interest to note wherein it differs, if at all, from our present ideas of what government stands for, and of how it should be carried on.

After a pious preamble, and a describing of themselves as loyal subjects of their dread sovereign, the covenanters define the objects of their colonizing adventure to be the glory of God, the advancement of the Christian faith, and the honor of their king and country. To better order, preserve, and further, these objects, they, in the presence of God and of each other, solemnly and mutually organize themselves into a civil body politic, and by virtue of the covenant, to frame and to enact, from time to time, such just and equal laws, ordinances, constitutions, and offices, as shall be thought most meet and convenient for the general good of the colony, and unto which they promise all due submission and obedience.

Making allowance for modern-day religious toleration, this would not be a bad or ill-timed constitution or government for any community. Brief as the instrument is, drawn up in the cramped cabin of a tiny vessel, in bitter cold and stormy weather; off a strange and forbidding coast; after a voyage of unspeakable hardship, and with hostile arrows beating the side of the little vessel, it would be easier, almost, to enumerate what is not in it than to summarize all it expresses or implies. One thing that may be safely said of it is, that it is an immortal tribute to the political genius of the race from



which it sprang. For if these were of England's best men, they were also of England's common men, men who lacked the distinction of gentle birth, high place, fortune, and college breeding, that marked so many of the after colonists of Massachusetts Bay. But such as they were, they anticipated Lincoln's "government of the people, by the people, for the people"; in religion, and piety, the missionary and martyr spirit of zeal and devotion and a reverent faith. We find, too, loyalty and patriotism, public spirit, mutual brotherhood and trust, and the fidelity that makes men stand back to back, and shoulder to shoulder, in times of stress. On the moral side of the instrument we see justice and equity, peace, good-will, unselfishness, and the resolve that all shall be ordered for the common good. Lastly, and perhaps most characteristic and important of all, the unobtrusive but clear determination to govern themselves. Thus was democracy planted on American soil, and hedged about with the noblest of human purposes.

When the stamp act of 1765 brought on a violent agitation in the colonies, parties in Great Britain were divided into Whigs, or liberals, and Tories, or conservatives; the former having the most talent and the latter the most character. The Tories being in power, the Whigs, as the opposition, attacked or criticised all the leading ministerial measures, the stamp act included. They certainly knew less, and probably cared less, about the colonies than did their adversaries; but in abusing the ministry, they necessarily had to eulogize the colonists, and so became endeared to the latter. Out of compliment to their friends at home, the extremists in the colonies took to themselves the party name of Whigs, and bestowed the name of Tories upon the submissionists and temporizers. When actual war came, after ten years of agitation, the American Whigs received an accession from those who deplored the war, but meant to stand with their own people in the conflict. The name of Tories, or Loyalists, as they preferred to call themselves, then remained to those who favored the reduction of the now united colonies by force. The Whigs triumphed, and the Tories, despite the appeals and protests of many of the Whig leaders, were treated with a severity that would now be impossible.

The War of Independence was carried on under the general direction of a Congress, in which each colony had an equal voice. This national government had no executive head, no judiciary, no power of taxation, no regulation of foreign or interstate commerce, nor any means of enforcing its own laws or measures. The articles of confederation that constituted this general government, proved a mere rope of sand. There was no national politics, because there was no real national authority. Each colony, now become a state, was completely sovereign and independent.

So long as the war lasted, some semblance of life and action was kept up in Congress, through the fear of each state that if the confederation fell utterly apart, the king might subdue the members of it singly. But there were thirteen separate wills and opinions to be consulted, and when anything was agreed, each of the thirteen did as it pleased about giving effect to it.

If the war was carried on by Congress, it was carried through by two men: Washington, with his little army of ragged, and half-starved continentals, and Franklin, with his successful diplomacy abroad. By bringing France into open alliance with the revolution, Franklin gave to America its one chance of ultimate victory, and the chance turned the right way.

When England gave up the fight, the confederation did fall apart. It was with the greatest difficulty that enough delegates to Congress were brought together to pass a formal ratification of the treaty of peace. The presumptive nation owed national debts at home and abroad, and had foreign treaty obligations to perform; but there was no national authority to enforce the national rights or to redeem the national obligations. The government and people of each state pursued their own selfish way, treating the

governments and the people of other states as aliens; often quarreling, and sometimes nearly coming to blows, with them, and negotiating and intriguing with foreign powers for their own advantage, regardless of the general interest. The long war had left its brutalizing influences upon the people, and the ten years of political agitation that preceded it had been the opportunity of the demagogue, as well as that of the statesman. Never before or since has the national character stood so low.

Out from the disgrace and danger of the situation, silently emerged a nationalist party, without name or formal organization, animated by the common purpose of creating some sort of central government that would be able to assure safety abroad and to secure peace at home. Once fairly started, the feeling spread, until in May, 1787, a convention of delegates from all the states, except Rhode Island, met at Philadelphia, under the presidency of General Washington, to draw up a plan of national government for submission to the states. After four months of deliberation and compromise, a Federal Constitution was adopted, to take effect among the ratifying states as soon as nine should ratify it.

The legislative power was given to a Congress, consisting of a Senate, having two members from each state, and a House of Representatives, with a membership from each state in proportion to the population of the state. The executive power was vested in a President chosen by electors appointed in each state, in number equal to the senators and representatives of the state. The judicial power was conferred upon a supreme court, and such inferior courts as Congress might establish.

The Federal Constitution chiefly differed from the Articles of Confederation, in securing to the three branches of the proposed Federal government the power to act directly, of their own authority and force, as to all matters committed to their jurisdiction, without dependence upon any state for anything. To that end, the Constitution, and the statutes and treaties made pursuant to it, were declared to be the supreme law of the land.

As a whole, the new constitution pleased nobody; no part of it pleased everybody; and anybody could give reasons enough for trying again, except for the persuasion that it had to be this or nothing. On the sharp issue of this or nothing, the lines were drawn, those favoring ratification becoming known as Federalists, and those against ratification as Anti-Federalists. Then followed a campaign of education, for which the people were well prepared by the old-time debating, and pamphleteering, over the navigation acts, the stamp tax, the tea duty, the inalienable rights of an Englishman, and the principles of no taxation or legislation without representation. Indeed, the Americans were at that time the most litigious people in the world. That they were well versed in constitutional law, had been admitted by the English attorney-general, in 1768, when he doubted that they had committed an overt act of treason, but was sure that they had come within an hairbreadth of it. It was a country in which everybody studied law, as a British commander of the period complained, on finding himself continually in legal meshes in the performance of his duties among a disaffected people.

The Anti-Federalists opposed the new Constitution on two grounds: They feared that the proposed central government would grow into a despotism, and destroy their liberties; and they were wedded to the principle of state sovereignty. Both feelings were strong; but the stronger, because it was the more immediate, was the feeling for preserving independence. They were willing to trim up the existing Congress a bit and to enlarge its authority, but without giving to it any direct power over the states or the people. The Federalists declined absolutely to go back to this old illusion, and so a battle royal was joined on the new Constitution, as Washington, and his fellow delegates from the twelve participating states, had framed it.

The battle went in favor of the Constitution; but by disheartening majorities, and upon the tacit understanding that amendments should be at once added to it, more explicitly safeguarding the personal liberties of the people and the rights of the states. Delaware, Pennsylvania, New Jersey, Georgia, and Connecticut, ratified the Constitution without much of a contest. Massachusetts followed next, after a struggle in which no means, high or low, for reaching and influencing public opinion, were left untouched. Here the party lines were drawn so sharply that men were almost ready to fly at each other's throats, singly or in battalions. According to the point of view, the Constitution was represented as a charter from Heaven or a compact with Hell. But it carried, and Maryland, and South Carolina, followed. While the battle was still raging doubtfully in New York and in Virginia, the ninth state, New Hampshire ratified, and according to its terms, the Constitution became an accomplished fact. This stiffened the Federalists in the remaining states, and casting all offers of compromise to the winds, they forced the ratification through by a vote of 31 to 29, in the New York Convention, and of 88 to 80 in that of Virginia. By the convention of North Carolina, the Constitution was rejected; and Rhode Island, which had refused to send delegates to the Philadelphia Convention, declined to create a convention to consider it. These two states took no part in the organization or institution of the Federal government, but soon after it was formed, North Carolina repented and sent in her ratification. This left Rhode Island in the legal position of a foreign nation, inclosed within the territory of another power, and coercive measures, both official and unofficial, were at once applied to her. The little state tried to avert the coming storm, but was as stubborn as ever against the Constitution. Her ultimate fate would probably have been the division of her tiny territory between Massachusetts and Connecticut, but this she averted by surrender, within fifteen months after the institution of the new government.

CHAPTER II.

THE CONSTITUTION ON TRIAL—STRICT CONSTRUCTIONISTS AND LIBERAL CONSTRUCTIONISTS—HAMILTON AND JEFFERSON IN WASHINGTON'S CABINET—EACH FOUNDED A GREAT PARTY—WASHINGTON, HAMILTON, JEFFERSON, AND LINCOLN CONTRASTED—PEN PICTURES OF HAMILTON AND JEFFERSON—JEFFERSON THEORY OF GOVERNMENT—HAMILTON'S POLITICAL CONCEPTIONS—THE SLAVERY QUESTION IN POLITICS—THE TRUE GRANDEUR OF OUR NATIONAL POLITICS.

A SCHEME of government needing much apology from its friends, and held to be beyond the scope of apology by its enemies, was destined to an uncertain fate, and to a troubled existence, whether on its way to an early death, or to a safe passage through the perils of infancy. Yet, from the moment of its acceptance by the states, the Constitution had several circumstances in its favor. In happily deciding not to undertake too much, its framers had expressed it in terms so general that, when strictly construed, as it readily might be from the adaptability of its language, it would be hard to maintain that any power beyond necessity had been conferred upon the general government. As the government of the confederation had utterly failed, and had actually gone to pieces, to refuse the new government a trial was to elect for the anarchy, civil war, and foreign aggression, already impending over the disunited states. The amendments

tacitly agreed upon, to be immediately added to the Constitution, respecting personal rights and the reserved powers of the states and the people, had removed the really practical objections to it, and those that remained, being speculative and theoretical, could not prevail against the hard facts of the situation. Lastly, everybody knew that Washington was destined to be the first constitutional President, and that he might be trusted to give the new order of things such direction as would tend to realize the best hopes and to dissipate the worst fears concerning the new experiment in government. So closely, indeed, had the Constitution been cut to his measure, that had he died during the period of the convention, it is certain that the Constitution, in the form in which it emerged, would never have seen the light, and that his death pending, ratification would have insured its defeat.

The Constitution having gone into operation, parties of strict construction and liberal construction, of its provisions, were at once arrayed against each other. The first, soon to take the name of Republicans, was led by Thomas Jefferson, of Virginia, author of the Declaration of Independence in 1776, an extreme state-rights man, who had abandoned the feeble Continental Congress, in the midst of the War of the Revolution, to devote himself to the public concerns of his own state. His absence as minister to France, while the Federal constitution was under popular discussion, prevented him from directing his influence against it, with the deadly effect that he would almost surely have exercised had he been at home. The party of liberal construction was headed by Alexander Hamilton, of New York, principal author of the constitutional treatise known as "The Federalist," a young British West Indian, who had served in the Revolution as military secretary to General Washington, and with the troops of the New York line; a man of marked ability both in civil and military affairs; frankly ambitious, but of scrupulous fidelity; ardently patriotic toward his adopted country, but full of moderation and generosity. His party brought over the name of Federalists from those who had advocated the Constitution before its adoption.

Washington was never a party man, and had not been a party nominee for the presidency. But his sympathies lay with the Federalists, and when, before the formal election, he was privately consulted as to any views he might have respecting the vice-presidency, he answered that he took it for granted that whoever might be elected would be "a true Federalist." In the hope of making the Constitution work, he induced Jefferson to take the first place in his administration, though he liked neither the man, his manners, nor his principles. Jefferson accepted the place from the same high motive of public service that had led Washington to urge it upon him; but he had a smaller opinion of Washington than that generally entertained by the public, and he was careful that official relations should not impair his full liberty of political action. The second place in the administration, but the first in importance for the time being, was given to Hamilton, who was acceptable to Washington in every way. Thus, and then, began that contest of parties that has lasted to the present day, and that will probably last as long as government by discussion — which means free government — shall endure. That either Jefferson or Hamilton dreamed that he was the fountain head of a stream of politics that should flow for centuries, is unlikely; for a dream of that sort would be apt to dry the fountain at its source, from neglect of present circumstances. Nevertheless, they were such fountain heads, however unconsciously. Of the future, we are no more at liberty to indulge in boundless speculation than were Hamilton and Jefferson in their day. But in our day, making allowances for temporary and local diversions of the currents, the streams of divided politics flow on, unbroken, from their original sources. It is not without right that present day Democrats and Republicans respectively claim Jefferson and Hamilton as their apostles. The unchanging and unchangeable basic principles of the two great parties truly claim descent from our

first leaders in constitutional politics. Since their day, there have been false prophets and deluding evangelists, but every now and then, the one party or the other goes back to its first source, and returns refreshed for renewed conflict. This recognition of continuity in political life gives dignity to our party struggles, and reconciles us to the perpetual contests of party. By those contests we live in freedom, and when they cease, the best hope left will be that our despots may prove benevolent after the accepted manner of despots, and leave to us the conventional animal comforts, as a solace for our departed liberties. The party of Jefferson, abandoning successively its earlier names of Anti-Federalist, Republican, and Democratic-Republican, is now the Democratic party. The party of Hamilton, successively known as Federalist, and Whig, now stalks as the Republican party. Occasionally, a third party arises, either to protest against a departure of one of the two permanent parties from fundamental principles, or against its failure to extend them to current issues, and sometimes to elevate some passing fad or fancy to the rank of a principle of government. Having accomplished its mission, or run its course, the new party dies, in honor or contempt, according to the intrinsic merit of its origin. It does not always die without inflicting grievous wounds upon the reputations or the fortunes of contemporary statesmen, but these are oftener sheltered, than exposed by the ingrained habit of the average man to stand by his party in good or evil report.

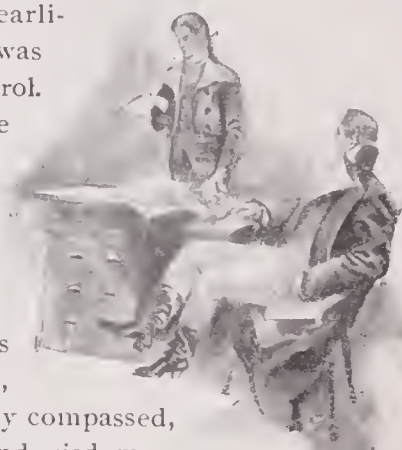
Viewing American politics in its entirety, it is evident, from what has been said, that Jefferson and Hamilton are the greatest and most enduring figures in our political annals. Washington is great as a patriot, and Lincoln as a statesman, and in those characters they have made immortal contributions to our national history. But neither founded a party, nor made original additions to American political principles, and therefore they differ from Jefferson and Hamilton as one star differs from another in glory.

Because the contest of ideas between Jefferson and Hamilton is still going on, it is hard to draw a picture of either that could find universal acceptance. The difficulty does not exist in the cases of Washington and Lincoln, whose characters are uniformly fixed in the popular mind, undisturbed by any misgivings as to their political principles. That evil things were said and thought of both Hamilton and Jefferson, in their day, goes for nothing, because the like fortune happened to Lincoln and to Washington in their respective days, and has happened to every public man distinguished enough by position or talent to arouse rivalry, envy, or resentment. Little people alone escape detraction — one of the compensations to the great army of the useful but obscure.

Of the two men, Hamilton had the most attractive personal qualities. This was partly due to his youthfulness, for he was but thirty-two years old when he became the founder of his party, and retained much of the frankness, enthusiasm, and generosity, that belong by nature to men still young. Jefferson, his rival, was fourteen years older, and had not reached and passed middle life without showing the searing effects of years of controversy, and of his keener insight of the motives and characters of men.

Hamilton's most remarkable trait was precocity. At the age of fourteen, he was the successful manager of a large mercantile house at St. Croix, engaged in foreign trade, and at eighteen, his fame was spread throughout the colonies as one of the most masterly advocates of their cause. Commerce and finance were topics that he had at his finger ends; and a style, and taste, nourished on the richest stores of poetry, history, and philosophy, enabled him to present such subjects in a manner to stir the dullest imagination. During his college years, his studies were directed especially toward political philosophy, and he had hardly more than taken them up when he was plunged into the constitutional controversy over the repressive measures of king and parliament against the colonies. At nineteen, he was a captain of field artillery in the Revolution-

ary army, and, having previously prepared himself for the post with customary thoroughness, he took rank at once as a distinguished officer. At twenty he became secretary to the general-in-chief, with the rank of lieutenant-colonel. He was not yet a man in years, but in volume, and importance, had already done the work of a lifetime, and though his active life had begun at the age of thirteen years, his intellect and manner had always been so staid and mature, that people habitually forgot they were dealing with a boy. There was never occasion for tears over his lost joys of youth. He had his joys of youth in employments appropriate to manhood, and his boy's life passed happily, in the way that his nature fitted it to pass. From his earliest years, his intelligence was both searching and profound, and it was united to an imagination always lively, but always under control. Though wonderfully industrious, often wishing the day twenty-five hours long, he was never a plodder; his intellect, lighted up by fancy, enabling him to reach by intuition what other men could only reach by long processes of thought or experiment. His native genius, his well-balanced enthusiasm, his unflagging capacity for work, his cheerful interest in his employments, his quick apprehension of all the issues and of all the consequences of a matter, his habit of ardent preparation for whatever lay before him; his early, and unique experience of actual life and affairs; his liberal, if quickly compassed, education, comprehending grace and beauty, as well as knowledge and wisdom — these qualities and attainments, aided by what Talleyrand called his faculty of divination, readily explain why, before his thirty-fifth year, Hamilton had won a reputation that, lasting down to our own time, ranks him, thus far as the greatest of American statesmen.



Hamilton was a small, slender, and delicately-built man, upright and quick in carriage, full of animation and energy, of charming manner and address, and in complexion and countenance an unmistakably refined, and transplanted, Scotchman.

Jefferson was forty-six years of age when he became the head of the Anti-Federalists, or Republicans, as they soon called themselves. His father was a rude pioneer planter, who became prosperous through the rise in the value of land and its products, and from his fifth to his nineteenth year, the son received the education of a gentleman of Virginia, and was a diligent, earnest, intelligent student. When nineteen, he left college, a good classical and modern scholar, and with a knowledge of mathematics and the natural sciences that marked him out, reasonably, for the career of a tutor or professor in one of those departments of learning. But he became, instead, a pupil in the office of the leader of the Virginia bar, where he spent five industrious and fruitful years, and was then admitted to the practice of the law. By the death of his father, he had already come into possession of a fine estate and a generous income.

For eight years, Jefferson followed the law with extraordinary success and distinction, living handsomely, and as handsomely adding to his estate, until he became an opulent and influential country gentleman. From 1769 to the outbreak of the Revolution, he sat in the Colonial Legislature for his county of Albemarle, but he failed in the beginning as a political orator, and abandoned public speaking forever. What his tongue lacked, however, his pen supplied, and of him, more than of any statesman of the modern world, it can most truthfully be said that "the pen is mightier than the sword." He was throughout his life a ready, fluent, and untiring writer. His first legislative act was an attempt to amend the law that impeded the voluntary freeing of slaves. The attempt was repelled, with much popular indignation against the author of it. Jefferson always had a gloomy foreboding about the consequences of slavery to the country; but he was not an abolitionist, either in his own case, or upon the moral principle of the question.

In 1772, Jefferson, having married a rich young widow, who brought him a great accession of lands and negroes, set up his new home upon the estate of Monticello. The marriage was childless, but one of lifelong happiness; the wife being beautiful, accomplished, fond of music like himself, and devoted to her husband.

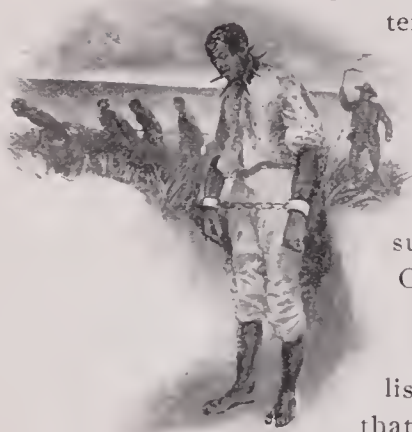
From his entry into public life until the coming on of the Revolution, Jefferson was active on the patriot side, his ability and zeal as a correspondent turning his personal and official services in that direction. His position was extremely radical for the earlier days; for he denied any political connection of America with Great Britain, except the incident of their both having, in the British King, the same executive head. As the quarrel deepened, his original radicalism won for him a leading place, and as a member of the Continental Congress, he gained immortality by drafting the famous Declaration of Independence. Shortly after the passage of the Declaration, he returned to Virginia to help in the work of making the aristocratic colony into a "truly republican" state. He succeeded in abolishing the entail of land, the preference of the oldest son in inheritance, and the support of an established religion by taxation, and he carried through a scheme of general education. He also carried a bill forbidding the further importation of slaves, but failed in his favorite measure for gradual emancipation. He declined to return to Congress, or to join Franklin in the mission to France.

In 1781, while Jefferson was serving as governor of Virginia, the state was badly overrun by royal troops and partisans. The defense was feeble and inglorious, and Jefferson, as the executive head, became the mark of popular indignation. He defended himself upon the ground that the military resources of the state had been exhausted in sustaining Washington's policy of carrying on the war in the north; and having declined to stand for reëlection, the resolutions of the legislature, vindicating his conduct, came to him in his character of a private citizen.

In the winter of 1782, Jefferson resumed his place in the Continental Congress, carried through the final treaty of peace with Great Britain, and the system of decimal coinage still in use, and framed a system of government for the vast territory of 430,000 square miles that New York and Virginia had ceded to Congress, on the con-

tion of other states that it belonged to the nation. Jefferson provided for seventeen states, with fanciful, classical names, and for a perpetual prohibition of slavery. Congress drew back from the number and names of the new states, and from the prohibition of slavery south of the Ohio River. But in the territory north of that river, in which slavery was prohibited, but fugitive slaves were to be surrendered and from the newly organized territory, the free states of Ohio, Indiana, Illinois, Michigan, and Wisconsin were eventually formed. By this time, Jefferson had grown to look upon slavery from other standpoints than that of expediency, for soon afterward he published the following sentiments: "I tremble for my country when I think that God is just; that his justice cannot sleep forever; that considering numbers, nature, and natural means only, a revolution of the wheel of fortune, an exchange of situation, is among possible events; that it may become probably be supernatural interference. The Almighty has no attribute that can take sides with us in such a contest."

From 1784 to 1789, Jefferson was in Paris, engaged in negotiating commercial treaties with European powers. Coming home on leave, immediately after the institution of the new government, and anxious to return to Paris, where things social and political were beginning to conform to his ideas, he accepted, on the urgency of President Washington, the office of Secretary of State, and so escaped the approaching horrors of the French Revolution. The principles of that Revolution he always warmly supported.



Personally, Jefferson was very tall, slender, and erect, of sandy hair and complexion, fond of music and dancing, a fearless horseman, and an athlete. He was hospitable, companionable, and cheerful.

The principles of Jefferson, and Hamilton, are the most important political contributions we have, because they only have been the creators of parties that, under various changes of name, but with substantial continuity of fundamental doctrines, have acted, or seemed to act, in conformity with the teachings of their respective founders.

The controlling idea of Jefferson was that of the fullest liberty to the individual, compatible with the indispensable claims of the community. He put man first, and government afterward, in the belief that a fair field and no favor would insure enough of individual virtue to promote the safety, well-being, and happiness, of society, with the least amount of collective interference. His theory involved the conception of a pure democracy, freed from artificial distinction, and from class privilege, in which the ultimate function of government would be that of a constable against persistent evil doers, and of a guardian to the hopelessly incapable, and unfortunate. Nonsectarian morality, universal education, and civil equality, were his contemplated agencies for building up individual character, and upon that to rest the state. He never had seen, and possibly never expected that anybody would see, just such a commonwealth as was pictured to his mind, but he felt sure that by always working toward the model, instead of away from it, both society and government would be in a constantly improving state. As the best means of serving and conserving the whole community, the activities of government, instead of being spent upon society in masses or classes, should be used in making, and keeping, the way clear for individual growth in virtue.

However difficult it may be to apply or identify these principles of Jefferson in the actual workings of political parties and popular governments, it is certain that as long as political freedom lasts they will never lack a large and enthusiastic following, anxious to assert them, and confident in its own ability to give them practical effect.

How Jefferson came to develop this theory of government, amid scenes and experiences so different from the ideal as to make him, in his own words, "tremble for his country," is to be explained by the circumstances that his mind was always that of a philosopher, and his disposition naturally sanguine, so that he neither doubted the veracity of his conceptions, nor was discouraged from moving along the lines that his reflection on man and society indicated. During his long residence in France, too, he was immersed in the wave of sentimental humanity that swept over the cultivated classes of that country, and which became so strange a prelude to the excesses of the ensuing revolution. Jefferson, the philosopher, was almost as great a figure at Paris as was his predecessor, Franklin, the sage, and his ideas were more in fashion than were Franklin's at the time of his accession.

Hamilton's political conceptions began at the end opposite to those of Jefferson. He believed that men were, by nature, so diverse in quality and tendency that, for the purposes of society, an equality of condition and opportunity could be affected only by government. Instead of resting the state upon individual virtue, he rested the security of individual virtue upon the collective power of the community. Like Jefferson, he favored individual liberty to the largest possible extent, but he measured the individual possibility, not by the smallest needs upon which society could hold together, but by all the claims of society that tended to the greatest good of all. He put the government above the man, because he believed that man could enjoy the blessings of civilization and association only under the protecting arm of the state. Though as sincere a republican as was his great rival, he saw in pure democracy, dependent upon the individual virtue of its members, backed only by a slender government, adapted to exceptional

cases and times of emergency, the prospect of ultimate anarchy, with society taking at last to despotism as a means of salvation. He wished government to be always strong, in order that it might be always free. He was anxious for personal freedom and welfare, as was Jefferson, but as government alone could assure those advantages to the individual, the latter must submit to enough government to assure them.

Jefferson's personal experiences had been those of a holder and cultivator of land, and of a lawyer practising among holders and cultivators of land. His ideal commonwealth would be, in the main, a rural community, engaged in agriculture. Hamilton's experiences had been in the fields of trade, commerce, and manufacture, and of commercial law. His ideal commonwealth would be a blend of agriculture, commerce, and manufacture, each in its due proportion for the general good. Such a mixed community could not be governed as the comparatively simpler community might be governed. Both leaders must have been in some degree influenced by the circumstance that Hamilton was a man of the town and Jefferson a man of the country.

A government on the Jefferson plan would, in the nature of things, be less exposed to corruption, and more economical, and one on the Hamilton plan abler and more effective. Such, in a broad and general way, has been the result of the Jeffersonian type of government under the original Republican, the Democratic-Republican, and the Democratic, parties, and of the Hamiltonian type under the Federalists, Whigs, and later Republicans.

That the principles of Hamilton have equal qualities of endurance with those of Jefferson is apparent. If the principles of the latter appeal to the feelings, those of the former appeal to the judgment. As both judgment and feeling play great parts in human action, the contrast of ideas is likely to last as long as the republic lasts, with ascendancy sometimes to one side, and sometimes to the other. To this day, our forms of government retain the impress of democratic simplicity imposed upon them by Jefferson, but the activities of government have been in the direction of Hamilton. The government is plain, but strong. Strong and plain it is likely to remain. When it becomes too strong we shall have an era of strength.

For more than half a century, the slavery question, which the makers of the Constitution consciously left to posterity because they could not settle it themselves, interfered very much with the direct flow of our political principles drawn from their original sources. Jeffersonian democrats became pro-slavery men, and Hamiltonian whigs became Abolitionists. But the streams of political tendency are back in their proper channels. Socialism, when it becomes the paramount issue, will again mix the fundamental parties; for it must draw on Jefferson for its sentiments, and on Hamilton for its powers. But when it shall have passed away as a subject of political agitation, however much or little of it may remain imbedded in our social or industrial life, the old party lines will straighten out once more, to be again curved and crossed by the next succeeding great issue. In this continuity and flexibility of party action, this cooperation of rival systems to carry us safely and prosperously through crisis or emergency, we may see the true grandeur of our national politics. They began with characters as upright and eminent as Jefferson and Hamilton, they are founded on principles as lofty as ever came from a human source; these principles have largely affected the national life and always in a wholesome way, and they remain at the service of the nation, in ways as wholesome yet to come. That ignoble men, methods, and measures make their way into politics is no cause of despair. They pass, after their brief day, and that which is sound and permanent endures.

CHAPTER III.

WASHINGTON'S TWO TERMS OF THE PRESIDENCY—HAMILTON'S EFFORTS TO POPULARIZE THE CONSTITUTION—NATIONAL BANK, ASSUMPTION AND PROTECTIVE TARIFF OPPOSED BY JEFFERSON—THE WHISKY REBELLION—INFLUENCE OF THE FRENCH REVOLUTION IN AMERICA—THE RECALL OF GENET—AMERICAN GRIEVANCE AGAINST FRANCE AND ENGLAND—THE JAY TREATY WITH ENGLAND—WASHINGTON'S FAREWELL ADDRESS—PRESIDENCY OF ADAMS—ON THE EVE OF WAR WITH FRANCE—THE ALIEN AND SEDITION ACTS—BURR KILLS HAMILTON IN A DUEL.

PRESIDENCY OF WASHINGTON, 1789-1797

WHEN Washington began his first administration, there were no constitutional parties. To him there had been no opposition. The mission of the Anti-Federalists had ended with the adoption of the Constitution. But their leaders in the several states held on to the late party name, and declared themselves the guardians of the reserved rights of the states and the people. Naturally, many of them made their way into the Senate and House of Representatives constituting the first Congress. Naturally, also, Jefferson came to be recognized as their leader. It was in that character that he had been brought by Washington into the administration, for there was no regular cabinet as yet. Looking upon Robert Morris, the financier of the revolution, as the leading political economist among the Federalists, Washington invited him to become Secretary of the Treasury. But he declared that Hamilton was the man for the place, and so Hamilton and Jefferson were brought face to face as members of the administration.

Though personally a Federalist, Washington dealt fairly between his two subordinates, moderated their rivalries so far as he could, and sought, but in vain, to get them to pull together.

Jefferson was a reflective rather than a constructive statesman, and the business of organizing the new government fell to Hamilton, whose genius particularly fitted him to the work. What Hamilton feared was that the infant constitution might be done to death in its early days by the power of the states, popular prejudice and neglect, and the hostility of the large majority that had lately fought it to the uttermost. He therefore sought to create throughout the Union a national interest—a class of people having a direct stake in the existence and vigor of the central government. His means were not abundant, but he used them skilfully. A national bank, handling the finances of the government and doing business throughout the country by federal charter, was to yoke the money power, always and everywhere potent, to the fortunes of the Constitution. The assumption of the war debts of the states, and their addition to the already large war debt created by the continental and federal congresses, meant an increase both of holders and holdings of government securities. A tariff having substantial protective features would be likely to build up a domestic manufacture, looking to the Federal Government for its future existence. All these measures were hateful to Jefferson upon principle and motive alike, but Hamilton and the Federalists carried them. By the time anybody was afterward able to strike an effective blow at them, the Constitution was secure.

The French Revolution began soon after Washington's accession to the presidency. Being an attempt to put sentimental humanity into practice, and looking to the American Revolution as its exemplar, the new order of things in France was received with enthusiasm in the United States. Hamilton detested it and Washington distrusted it,

but Jefferson was naturally its American oracle. In its liberty, fraternity, and equality stages it gave no trouble.

Hamilton's tariff for revenue, with incidental protection, failing in the incident of revenue enough to meet the expenses of an Indian war in the northwest and the charges of debt conversion, resort was had to internal taxation. This brought on a rebellion in Western Pennsylvania, where the now taxed whisky had always been free as water, except for the small expense of distillation. The rebellion shook the young Federal government; but Washington, with equal patience and firmness, holding out the olive branch, but not hiding the sword, and using in a manly way his known popularity, and appealing to the patriotism of the misguided mountaineers, ended the rebellion peacefully but triumphantly. Thus the Constitution came safely out from its first shock.

In 1792 Washington was the unanimous choice of the people for the second term. He would have preferred retirement, but retirement would have been too great a public injury in the unsettled state of the public mind, and with the new government still in an experimental stage.

By the time Washington was reinaugurated the French revolutionists had put their king to death, were following suit with the aristocrats, had proclaimed a republic, and declared war on England. Citizen Monroe, the American minister at Paris, had been received and embraced in the national convention in token of the union of the sister republics. Citizen Genet was appointed French envoy to the United States and departed for Philadelphia. Except the bloodshed, he found, as it seemed, a second French republic in the new world and began to act as its administrator. Jefferson, who saw France advancing, though turbulently advancing, toward his ideal of a pure democracy, was in full sympathy with what was going on in France, but not with the extravagances of Genet in America. Despite that envoy's glaring breaches of diplomatic propriety, he procured his official reception by the President, but he also supported Washington's proclamation of neutrality, which appeared under his counter-signature as Secretary of State. His just influence with Genet could not restrain that madcap from treating the United States as a French dependency, using their territory and resources for levying war upon Great Britain, and setting up French courts in American ports, to condemn British vessels captured by American privateers under his commission, as prizes of war. Jefferson's sympathies were heartily with France in her war with England; but he shrank from launching his own country into a conflict wherein it would have to follow a reckless lead, which would perhaps embroil it with nearly the whole of Europe, and possibly leave it materially exhausted and politically ruined. A benevolent neutrality toward France was as far as he was prepared to go. Like some other philosophical revolutionists, his practice drew back from his principles.

Genet's crowning act of folly was to assume that the American Government was his enemy, but that the American people were his friends, and he proposed to appeal to his friends against his enemy. This was too much for a people that had waged a ten years' war of legality against their late king before taking up arms against him, and had lately waged a war of intellect among themselves, before establishing a government by means that they regarded as binding as the arbitrament of the sword. This government Genet now proposed that they should overturn; for no grievance of their own, but in the supposed interest of a distant people whose idea of the uses of liberty was a license for bloodshed and anarchy already revolting to the innate soberness of Americans. The saturnalia was over and the people turned to Washington, the serious, formal, unimaginative man, who had no philosophy as to the rights of man and no very clear notion what was meant by equality; but who knew and practised the golden rule of life, while never forgetting what was due to himself. Jefferson's long dispatch to Min-

ister Monroe, who, in Washington's opinion, had been a little too spectacular at Paris, bore at least the note of sincerity. It vindicated the rights of the United States, defended the conduct of the government, set out the indictment against Citizen Genet, and demanded his immediate recall. This was granted with alacrity, but as the progress of the revolutionary idea had already destined him to the guillotine as a moderate, he kept his head on his shoulders by invoking as an exile, the further hospitality of a country whose hospitality he had grossly abused.

Jefferson's position had become irksome. He was the recognized leader of the Republicans, as they now called themselves, in compliment to their French brothers, and who had tried to engage the country in a war wherein it had nothing to gain and everything to lose. He had permitted persons and newspapers under his known influence to lampoon his official chief, and he had, unfortunately for his own future fame, entered in his diary his cold, cynical observations on the writhings of that sensitive and dignified man under the unaccustomed torture. He was patriot enough to love his whole country, though he preferred the virtuous agriculture of the South and West to the sordid trade and commerce of the East. That commerce was now imperilled by the resentments of France and the counter-measures of England. It was a time when belligerent rights were pushed to an extreme, and the rights of neutrals had but a small standing in the law of nations. Jefferson drew up a project for laying before the belligerent powers a declaration of the neutral rights of commerce claimed by the United States and of declaring war upon the first belligerent that disregarded them. As the naval supremacy of England over France was almost sure to bring her first into conflict with the declaration, it was virtually a proposal for war with her. Jefferson then resigned and went home to Monticello, free to indulge his talent for guiding his followers by the pen.

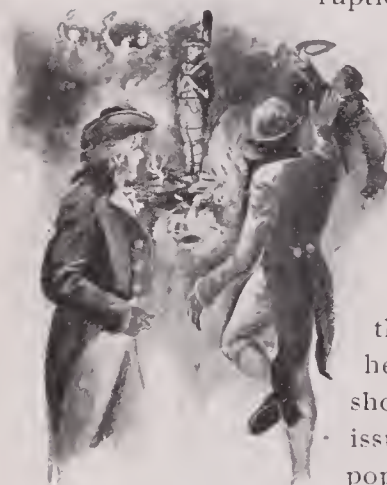
The country was drifting toward war with England, with whom then, as now, its most profitable commerce existed. The British grievances against the United States were many, some of them coming over as legacies from the time between the treaty of independence and peace and the formation of a national government, and some as late as the brief hostilities carried on from American soil by Citizen Genet. Whether early or late, they remained unredressed, and aggravated by delay. Though not proceeding to actual war, the British Government showed its opinion of the real situation by refusing for a long time to appoint a minister to the United States, or to execute the unfulfilled parts of the treaty on its part, till the new government should give some proof of its ability and disposition to perform the national obligations.

After parting company with Jefferson, Washington took the most important step of his political career. He sent Chief-justice Jay, of the Supreme Court, to London, as a special envoy to negotiate a treaty of settlement and commerce. His act was well received at home, thus showing he had rightly judged the real sentiments of the late outburst for the French Revolution, including imitations of the Jacobin clubs of Paris and even of the costumes of the revolutionary epoch. Jay met in England what he had expected to meet — coldness, indifference, resentment, and distrust. His country was held in neither dread nor esteem. It was paying tribute to the Algerine pirates, rather than fight for the safety of its commerce in the Mediterranean. Washington was personally respected, but Jefferson was regarded as the type and leader of his countrymen — a French partisan, anxious to atone for his British descent by aiding to desolate the hearthstones of his ancestors. Jay, however, was no common man; in fact, he was a very uncommon man. It was of him that Webster said that when the judicial ermine fell upon Jay, it touched nothing less pure than itself. British statesmen in those days



were often rakes, gamblers, and drunkards: but their codes of honor and of manners were very high. Jay had not the vices of a gentleman of that time, but he lacked nothing in points of honor or manners. Though Franklin and Adams had preceded him, he was the first of American diplomats to win both the personal confidence and esteem of those to whom he was accredited. With much tact and patience he extorted a treaty; for the disposition of his counter negotiators was to put off everything till they should have had it out with France, especially as British trade was flourishing as a consequence of the war, and of the distress of other belligerents and of neutrals.

In three points he failed: the freedom of neutral commerce, the privilege of West Indian Trade, and the abandonment of the right of search of American vessels for British born seamen. For what he obtained, he had to make important concessions. Washington was bitterly disappointed, and felt at first as though he had been stabbed at the table of friends. But the maimed treaty was a great gain, and as such he submitted it to the Senate, which sagaciously recognized it as a good treaty in face of the adverse circumstances, and ratified it by the necessary two-thirds majority. But its publication caused a whirlwind of passion. Jay narrowly escaped impeachment by the House of Representatives for high crimes and misdemeanors: meaning treason and corruption. He and the treaty were burnt in effigy all over the country, and a



designation of Washington that had become popular was changed into the insulting epithet of "stepfather of his country." Washington declared that he would rather be in his grave than be President. But he stood firm, though firmness in presence of popular agitation has been rare with our Presidents. The treaty went into effect; it ensured peace and brought considerable prosperity, and in 1796 Washington only was thought of seriously, even by many of his late stepchildren, as his own successor. But he had grown deaf, the strain of the last three years had aged him beyond his time, and, believing that he would not survive another term, he resolved that the presidency should not, by his example, become a life tenure. So, in September, he issued a farewell address to his "friends and fellow citizens." It is less popularly known and read than the Declaration of Independence, being much longer, more serious, and lacking in the rhetorical attractions of Jefferson's famous production. Naturally enough, it draws on the writer's experience for topics of discussion, and refers to questions then living, but now dead, as matters of primary importance. But it pointedly assails none, and its arguments on then current matters are founded on lasting considerations. Its publication was received by the leading Republican organs with renewed outbursts of political abuse and personal calumny. Washington had singled out party spirit and foreign partisanship for especial reprobation, and his assailants believed, perhaps rightly, that he was particularly aiming at them.

In these first eight years of the Constitution, Hamilton, who had left the administration in 1795, had organized the national government on strong lines, and Washington, though narrowly escaping defeat, had kept the country from disastrous entanglement in the European war. But, on the whole, Jefferson had gained. Republican France had become the popular American model. Washington had been driven from stateliness to simplicity in his official and social life, and every federalist statesman with a possible future conformed outwardly to the proposition that one man was as good as another, and something better. Andrew Jackson, representative in Congress from Tennessee, in backwoods dress; rude, violent, and quarrelsome; trampling on the amenities of political, and the conventions of social life, was the admired type of a tribune of the people.

PRESIDENCY OF JOHN ADAMS, 1797-1801

Hamilton would have been the proper successor of Washington. He was the undisputed head of his party and admitted to be the ablest member of it. But he was an undeniable aristocrat, though a kindly one; money-making men had grown rich out of his banking, funding, and tariff measures, though he had not; he had no personal hold upon the mass of his party, whom he had kept at a distance, preferring the part of a leader of leaders, and there was a little speck of immorality upon his personal record, that the Republicans could easily spread into an ugly blotch. So he was out of the race before he was in it. Adams had been Vice-president all the time that Washington had been President, and was in the line of promotion. That was not all, but it was something. He had been a faithful Federalist all during his period of office, and had a rather conspicuous political record as a revolutionary and confederate statesman. Still, Jay would probably have been the favorite of the federal leaders, had he not been paying the penalty that patriotism so often pays for the honor of serving a democracy.

At that time there was no separate vote in the electoral college for Vice-president. Each elector voted for two persons for the office of President. The practical arrangement was that each elector should cast one vote for the presidential candidate determined upon by himself and those with whom he acted, and that a few votes should be scattered in the second vote, so as to give the vice-presidential candidate the second place, but not to tie him with the presidential candidate. The mode of electing the President and Vice-president was an original invention of the Constitution makers, as a compromise for other plans, based more or less upon actual experience, none of which found acceptance. The plan was a dead failure from the very beginning, and though altered to provide separate voting for the vice-presidency, its electoral college remains, what it has ever been, an absurd and clumsy, and a danger and scandal-breeding device, serving no good end whatever, and capable only for mischance and mischief.

Jefferson's chances for winning the presidency were so fair, and it was so uncertain whether Adams or Pinckney, of South Carolina, could command the strongest Federal support, that Hamilton urged that each federalist elector should give one of his two votes to Adams and the other to Pinckney; subject, of course, to the constitutional provision that one of the persons voted for must not be an inhabitant of the elector's own state. This he deemed the surest way to beat Jefferson, a matter more important than decided beforehand that Adams was to be President and Pinckney the Vice-president.

The electoral votes were 138, so that 70 were necessary to elect a President. Adams had one more, and Jefferson two less than the required majority. But Jefferson was ahead of Pinckney, and so became Vice-president.

Shortly before the election, a stroke of high politics occurred, which, if attempted now, would consign the most popular candidate to eternal oblivion. The French minister wrote an official note to the Secretary of State, grossly attacking the now expiring administration of Washington, announcing that diplomatic relations were suspended—a covert threat of war—and promising a return of amity when France should find an acceptable government in power. This official communication the minister gave to the press. It failed of its purpose to sweep Jefferson into the presidency, but it increased his vote enough to make him Vice-president, an office he did not desire.

Adams declared his policy to be to follow in the footsteps of his illustrious predecessor. The first step he took in this direction was to retain, unbroken, that predecessor's cabinet. But they were Hamilton's men, and took their orders from him instead of from Adams. This they could justify by Hamilton's recognized position as the uncrowned king of the Federalists. There was not such personal feeling between Adams

and Hamilton as would make trouble, but they had conflicting views of public policy. The horrors of the reign of terror, and the arrogant and insulting behavior of the French Government toward that of the United States had produced a revulsion of popular feeling; so that Jefferson and his Republican party were discredited, and became glad to make and keep themselves obscure till the storm should pass. Hamilton wished to drive home the federalist advantage by fanning the warlike feeling against France. A successful war, to back up the capacity that the party had shown in works of peace, would kill the now unpopular party of Jefferson, and ensure the government for so long a time to the Federalists that the nation would bear their mint-mark forever. But Adams preferred peace. As other Presidents have done, he shrank from the responsibility that a war throws, in excessive weight, upon presidential shoulders. The treaty with England had changed an evil into a good situation; it had been plucked out of the midst of difficulties, and a like hope and a like result were possible in the case of France. Surely, the course he contemplated was the course that Washington, his professed exemplar, would have taken under the like circumstances. It was the course that Hamilton himself had proposed, as a prelude to actual war — an alternative to war it could hardly be, since Hamilton would have stood out for higher terms than Adams would dream about, and higher than the French would conceivably grant. The new American minister to Paris having been rejected with insult and ordered out of the country, a fresh diplomatic approach could only be made by indirection. The approach was not encouraging, but nevertheless a commission of three envoys was sent to France, where they accepted, as a disagreeable necessity, the official and social insults heaped upon them, and sought, by any practicable means, to advance the object of their mission. In the end they got, confidentially, as far as the preliminaries, which were the payment of a large indemnity to France, for alleged broken faith and a repudiated alliance, and of a big corruption fund, for the personal profit of the patriots then constituting the French Government. At the worst, Jay, in England, had been received by gentlemen like a gentleman; but there were gentlemen treated as pickpockets by pickpockets indeed. For this result had Adams petulantly order the reluctant envoys to leave for France by a certain day; had as petulantly dismissed his whole cabinet on a hasty charge of intriguing against him, and had passionately accused Hamilton of being in the British interest; an accusation that Hamilton repelled in terms to make Adams contemptible, if they did not make a lasting breach in the Federalist ranks.

The envoys, of course, rejected the confidential preliminaries with indignation, and were thereupon ordered to quit the country. The French had long been capturing and confiscating American vessels and cargoes on pretense of violations of belligerent rights, and they now proceeded to capture and confiscate all they could, without any pretense. The little American navy and a large number of American privateers retaliated, and a full fledged maritime war went on with the two powers, nominally at peace, though not in amity. The publication of the confidential tribute and bribery correspondence, and of the particulars of the treatment of the envoys, set America in a flame and a war fever swept over the country. England was again, for the moment, in favor; for she had behaved not unhandsomely under provocations that France could not pretend to have received. Blood, after all, was thicker than water, and ties of race and language, though strained, could not be broken. This kind of talk was pleasing to Adams and other Federalist leaders, for their model of an American republic was an improved and purified British commonwealth.

Congress voted a large army for the defense of the country, and, amid universal joy, Washington accepted its command. It never came into active service, for the fortune of war turned against France in Egypt and Italy, and eventually a treaty was made with Bonaparte, who had become the head of the French republic, and who did not

wish to be teased by an unprofitable war with the United States while carrying out his already large designs of European conquest.

Taking advantage of the prostration of the Republican party, the furore against France, and the seeming popularity of England, the Federalists passed two acts through Congress, suggested to them by recent British legislation. Under the one, the President was authorized to order out of the United States, on pain of fine and imprisonment, any alien whose presence he deemed dangerous to the public peace and safety, or whom he reasonably suspected to be concerned in treasonable or secret machinations against the national government. The other made a criminal offense to combine or conspire to oppose the lawful authority of the government, or to intimidate its officers, or to incite riot or insurrection against the federal laws, or to publish false, malicious, and scandalous writings against the government, the Senate, the House of Representatives, or the President.

Both acts, at the time of their passage, were capable of striking hard among Republican politicians and editors—for this was a period when a traveler wrote that he found many Englishmen and Frenchmen in the United States, but few Americans—it was suspected by those exposed to the acts that they were meant to strike hard at them, and this suspicion proved correct.

Powerless in Congress and in the national government, Jefferson was obliged to fall back on his doctrine of state rights, to find fighting ground against the alien and sedition acts. His party had majorities in Virginia and Kentucky, wherefore through the legislatures of those states were passed resolutions, expounding a theory of the Constitution that made it a compact among the states, and claimed for them the function of holding the federal government to a strict exercise of its powers. How they were to perform this function, Jefferson did not make clear; but his able lieutenant, Madison, thought it would be by a convention of the states, whenever Congress should need to be disciplined. To such a mode of discipline Congress could hardly have objected on practical grounds, except by way of protest against unfruitful agitations; but Calhoun afterward gave the resolutions living force by claiming for each state an independent power of nullification.

The constitutional aspects of the alien and sedition laws were soon lost in their practical effects. They were sometimes unnecessarily, and often unwisely put into operation, and were grossly abused in partisan interests. Popular feeling, impulsive and therefore wrongheaded, at first, will generally come right if time for reflection be afforded it. In this case, it got enough time and had plenty of opportunity for reflection. So it came right, and though the Federalists repented them of the laws, it proved a death-bed repentance.

Hamilton was opposed to a second term for Adams, a stout, florid, vigorous man; quick tempered and touchy; dogmatic, bookish, and rather priggish; with the making in him of a good trial court lawyer, head master of an academic school, or a pulpit preacher. A man of iron integrity; an effective speaker and a masterly writer; having a decided aptitude for and much experience in statesmanship; but an impracticable politician unless he could be led or driven, which was quite out of the question. Federalist faction, strife and folly had brought the party fortunes lower than the safety point; but they were not desperate by comparison with the prospects of Jefferson, whose candidacy was the one only danger signal. To make sure against him, Hamilton turned to Washington, who was appreciative of the motive and sympathetic with the object; but he had personal reasons enough, in age and infirmity, to recoil from another term in the presidency, while his sentiments about party—neither modified nor



molified by what he had witnessed since his retirement—would forbid his standing for election as a party candidate, a character which the existing circumstances would have compelled him to assume. He died while Federalist suggestions were still reaching him of his duty to his country, and his country found a common theme for all opinions in paying due reverence and honor to his memory.

Jefferson, the Republican candidate for the presidency, and Burr, the intended Vice-president, each received 73 votes. Adams had 65, and Pinckney, the choice of Hamilton, 64 votes. This threw the election into the House of Representatives, where the vote was to be by states, and had to be confined to Jefferson and Burr, because they had a majority of the electoral votes. The Federalists had been defeated by the electoral vote of South Carolina, one of their sure states, and the home of Charles Cotesworth Pinckney, the preferred candidate of Hamilton. Until they heard of this surprising defection, they were confident that they had one.

Two plans were successively devised to defeat the election of Jefferson. The first was to keep the house balloting without result till the offices of President and Vice-president should become vacant by the expiration of the terms of the existing incumbants, and so force a new election, which the Federalists might carry. The Federalists were strong enough to do this, but the people outside the House were stronger, and would have no juggling of that sort with the Constitution. It was soon given up, and no Federalist leader was willing to admit that he had so much as heard of it. Whoever devised it paid Hamilton the tribute of not submitting it to him. The second plan was to choose Burr for President and reduce Jefferson to the vice-presidency. This was partly defeated by Hamilton, who wrote to his friends in Congress that if hatred were allowable in any case, he ought to hate Jefferson, while personally he had always stood well with Burr. But the public good was paramount to every private consideration, and upon intimate and accurate knowledge, he declared that the election of Burr would be the elevation of a desperate and profligate man. It was partly defeated by Burr, who having first intrigued with Republicans to get an equal electoral vote with Jefferson, was now intriguing with Federalists to reap the fruits of his first intrigue. Fearful that Hamilton's influence would prevail, he drew back from giving a pledge of turning Federalist in such a form as would expose him to his own party if he should fail of election. As it happened, his fear was groundless; for a majority of Federalists believed there was more "public good" in electing Burr under any kind of a promise to turn his coat than to elect Jefferson on the honest grounds proposed by Hamilton. But a distinct pledge some of them would have, while Burr feared to give it, and after a long struggle Jefferson was chosen. The truth could not long be hid; the Federalists who had intrigued with Burr brought shame on their whole party, and Burr was politically ruined, as fully as though he had given the required pledge and lost the election. As an experienced and skilful duellist, he saw his way to revenge on Hamilton, and ultimately forcing a quarrel upon the latter, he killed Hamilton, as he had deliberately planned. His desire for vengeance was fanned to a white heat by the consciousness of how narrowly he had lost the presidency.

Jefferson, of all public men, had divined how surely matters were moving his way. He could not have foreseen how much they were to be hastened by events of the late administration; but when they came he held his followers back, and let federal dissension and maladministration run their full course. In the darkest days of his party he retained a lively faith in the coming of the popular democracy, and his own call to guide its course. But the democracy and the call came four years sooner than he had latterly expected. They had not come with a rush, yet, with the small opening allowed it, the Constitution had already grown large and strong. Now, his mission was to help personal liberty, and state rights, the guardians of that liberty to grow large and strong.

CHAPTER IV.

PRESIDENCY OF JEFFERSON—INFLUENCE OF HIS WORKING CHART ON POLITICAL LIFE—PURCHASE OF LOUISIANA—THE COUNTRY PROSPEROUS UNDER JEFFERSON'S FIRST ADMINISTRATION—BURR'S SCHEME OF CONQUEST—THE NAPOLEONIC WARS AND EFFECT ON AMERICAN COMMERCE—THE EMBARGO ACT AMENDED—PRESIDENCY OF MADISON—HENRY CLAY AND THE WAR OF 1812—SOME RESULTS OF THE WAR—THE HARTFORD CONVENTION, AND COLLAPSE OF THE FEDERAL PARTY.

PRESIDENCY OF JEFFERSON, 1801-1809

JEFFERSON was inaugurated in the new city of Washington, as yet almost unbuilt. He went to the capitol with a small military escort and, in the presence of Congress, read his inaugural address in a low and monotonous voice. Its moderation was a disappointment to his friends and a surprise to his enemies. Without calling names, he buffeted the Federalists a bit, and he glossed over what he admitted to be "the blood and slaughter" of the French reign of terror. But the general tone of the address was conciliatory and conservative. He held out the olive branch to the Federalists, and was respectful and even gracious to the Federal Constitution. As he henceforth had to act, as well as think and write, he had constructed a sort of working chart, which he included in his address. It has cut a large figure in our political life, its very words and order of arrangement being often borrowed for present needs, and portions of it sometimes honestly offered as original contributions to political discussion, so completely has the whole become a part of the common stock of political maxims.

The chart embraces equal justice to everybody; peace and friendship with all nations but no alliances; state rights in domestic affairs; the general government in full constitutional vigor, for peace at home and safety abroad; prompt remedy of public evils, to avoid revolution; submission of the minority to the majority; an effective militia; civil supremacy over military authority; public economy, that labor be not oppressed; honest payment of public debts; sacred preservation of the public faith; encouragement of agriculture, and commerce as its handmaid; the diffusion of information; the arraignment of abuses at the bar of public reason; freedom of religion, of the press and of person; the protection of habeas corpus, and trial by impartial juries. In brief, "a wise and frugal government, which shall restrain men from injuring one another, shall leave them otherwise free to regulate their own pursuits of industry and improvement, and shall not take from the mouth of labor the bread it has earned."

The first difficulty that confronted the new President was one of patronage. Partly on patriotic and partly on political grounds, the public offices had been almost exclusively filled by Federalists. With the Republicans in power, this was a hard state of things to defend or maintain. In the state of New York, Vice-president Burr had built up an efficient party machine, the workers of which were compensated by public office or employment. That was too far for Jefferson to go, either as a patriot or philosopher. Pathetically complaining of office holders, as a class, that few die and none resign, he set himself anxiously at the task of relieving what he felt to be an intolerable situation, without debasing the public service to the character of a feed trough. In the end, he settled upon the plan of removing Federalists, on the ground that they had forfeited their right to retention in the service of the whole people, and those who had been rushed into office in the closing days of the late administration, on the ground that as

they had been crowded in for party reasons they might justly be crowded out for the same cause.

The great act of Jefferson's administration was the purchase from France of the vast territory known under the general name of Louisiana, from which so many states have since been formed. He could not have believed that he, or even Congress, under the Constitution, had the power to acquire this territory; but he knew that the West must have an outlet to the sea, by way of the Mississippi, under the auspices of the United States, or that it would break from the Union and take care of itself.

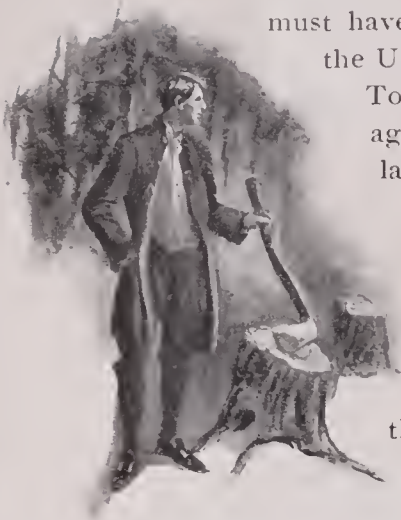
To assure the Union, and incidentally to give room for the expansion of ages, he affected to see implied powers in the Constitution that drove the last nail, logically speaking, into the coffin of strict construction. Perhaps he felt that he and his party might be trusted to see when the Constitution meant more than it said. He certainly would not have allowed Adams and the Federalists the like discretion.

Jefferson was personally popular and conducted the government on popular lines. He made great retrenchments in public expenses and abolished a multitude of offices, which he was able to do because the displaced officials were nearly all Federalists. When sinecure offices are held by the party in power, their abolition, except through fear of the voters at the next election, is almost impossible. This is one argument for a stable civil service, which no party would have a lively interest in unduly swelling. Jefferson, as author of the Declaration of Independence, could not have foreseen that his accusation against the British king of creating a multitude of officers, to eat out the substance of the people, would find a truer example generations later, when the amount of bread taken from the mouth of labor, to meet the exactions of national, state, and municipal governments, would give to this country the distinction of paying more for government than any other civilized people, and getting less than any other in proportion to what is paid.

It was not so much patriotism as loss of place and privilege that made many Federalists despair of the future, and engaged some of their leaders in the design of separating New York and New England from the Union, to form a new confederacy, of the elect and enlightened. It was characteristic of Burr, holder of second place in the Republican party, to be hand and glove with these seceders. It was also characteristic of Hamilton to oppose the scheme to the uttermost. It was the last of many services to his adopted country, for in this new crossing of his designs Burr found his opportunity of dragging Hamilton to the gentlemanly murder to which he had already destined him. Considering the treatment received in his lifetime by Jay, who had rescued his country from an impending and desolating war, it was quite fitting that when Hamilton got the post-mortem honor of a statue, his own descendants should provide it.

Jefferson's first administration was one of the most successful and prosperous that the country has known. Population grew apace, agriculture and commerce flourished, public expenditure was light, the revenue was abundant, and the national debt was paid off so fast that Jefferson proposed an amendment of the Constitution in behalf of public improvements and national education to dispose of the surplus that threatened soon to become an embarrassment. Tariff duties were already low, except on luxuries, and he expressed the belief that the wealthy who paid the high duties would prefer an enlargement of the beneficent powers of the general government while he was at its head.

During Jefferson's first term the Constitution was amended to provide for distinct votes in the electoral college for President and Vice-president. Burr was, of course, dropped from the Republican ticket and thereafter became, financially, socially, and



politically, an adventurer. But the magnetic power that he had always exercised over men and women remained and he engaged in a vast and obscure enterprise, having for its possible ulterior object the creation of an independent power in the Southwest, and for its ultimate objection a gratification of his love for intrigue and power, and a command of the persons and fortunes of his victims. Putting forth the strong power of the national government that Jefferson kept in reserve for emergencies, the latter broke up the enterprise, arrested Burr and his leading confederates by military authority at New Orleans, and brought him to an unsuccessful trial for treason. It was never known certainly whether Burr meant a large scheme of colonization, as he claimed, or as aggression on Spanish-America, or a secession of the West; but Jefferson gave him a final fall and, incidentally, proved that the Federal Government was powerful enough to defend its own integrity, and perform its international obligations.

Jefferson and his party were less successful in a raid on the Supreme Court, the judges of which were all Federalists. Justice Chase was impeached by the House and tried by the Senate, for alleged arbitrary and oppressive conduct while holding a circuit court in Maryland, for the trial of indictments under the late alien and sedition acts. The impeachment failed, after it had degenerated into a mere partisan contest, in which Burr, as president of the Senate, had thrown the power of his office to the Federalists. Stung by their defeat, the Republicans tried to amend the Constitution so as to increase the powers and facilities of impeachment, but in this they also failed. Before these failures occurred, the presidential election of 1804 had been held, in which the Federalists had carried only Connecticut and Delaware.

When Jefferson began his second term the Napoleonic wars were in full progress, involving nearly the whole of Europe. The Jay treaty had expired and was not renewed. In striking hard at each other, France and England incidentally struck hard at the flourishing commerce of the United States. Both relentlessly exercised the right of search of American vessels for enemy or contraband goods, even up to the mouths of American harbors. Privateering flourished, or rather piracy flourished under the name of privateering, and as Americans largely engaged in this warfare under one belligerent flag or another, the losses of regular commerce were in some measure recouped. The naval resources of the country were so abundant and flexible that, if put forth, the United States could have compelled recognition of unsupported diplomacy. But a strong navy the Republicans would not have. It meant increased taxes, and agriculture, amid which the Republican strength mainly lay, had not yet found out that its fortunes were bound up with those of its handmaid commerce.

International law did not at that time recognize the right of a citizen of one country to change his allegiance to another without the consent of his own sovereign. The United States, as a new country, needing immigration, was striving hard for the contrary principle. This made more trouble with Great Britain, whose warships and privateers were constantly taking English speaking seamen from American vessels, who could not establish on the spot their American birth. The claim was pushed to an extremity when the British frigate "Leopard" forcibly brought to the American frigate "Chesapeake," and mustering her crew, took away four seamen as British subjects. While giving the British Government time to hear of and disavow this act, Jefferson, by proclamation, withdrew the hospitality of American ports from British warships.

Naturally unwilling to drift into a possibly simultaneous war with France and Great Britain in behalf of American commerce, Jefferson hit upon the device of backing up his incessant diplomatic pressure on both governments by getting Congress to prohibit American vessels from engaging in foreign commerce, and foreign vessels from taking cargoes in the United States. This was a hard blow at the Eastern States and gave renewed and genuine life to the feeling there for breaking away from any

further political union with the South and West. Foreign commerce, however, was so profitable that a great deal of it was carried on, despite French and British depredations upon it, and the penalties of the embargo act.

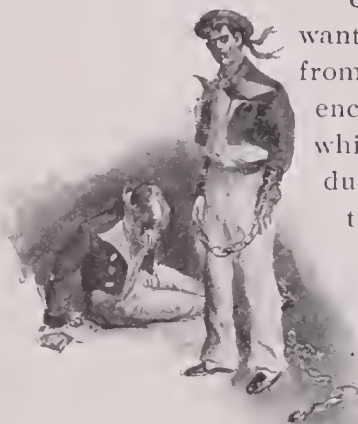
Presidential nominations were at that time made by congressional caucuses. Madison, the right arm of Jefferson for years past, was the Republican choice, after Jefferson had firmly declined nomination for a third term. He was getting tired, and disliked a life tenure of the presidency. The popular election again went strongly for the Republicans, so far as the whole country was concerned. But the handwriting on the wall in New England was plainly to be read. New England the Federalists carried, and their next step would have been to carry New England out of the Union. This, Jefferson and his party averted by hastily amending the embargo act, so as to limit it to England and France. The principle of the act was saved, and the practical strain of it was relieved by the combined effect of the lawful and unlawful commerce.

PRESIDENCY OF MADISON, 1809-1817

Madison was 58 when he became President; a small, neat, affable man, of faultless manners; a man of affluence, and accustomed all his life to good living and good society. His association with Hamilton and Jay in the authorship of "The Federalist" has disposed political and historical writers to rank him high as a statesman and philosopher, without much scrutiny into his actual claims by comparison with others. A favorite way of estimating him is to rate him with Hamilton; but, ill temper omitted, he was nearer to Adams. Where Hamilton intuitively grasped the heart of a matter, Madison proceeded, by sure, slow courses, to a provable result. Hamilton had the full courage of his convictions; Madison had convictions without daring. He had been very delicate in earlier life and, though his health improved with years, he remained shrinking and timid in disposition. Never willingly a party man, he was sympathetically a Federalist till he came under the influence of Jefferson, and became the latter's chief deputy. To Jefferson he was a great prize, being more of a practical statesman than his patron, and intellectually a giant among Jefferson's poorly furnished following. The latter somewhat weakened his own policy and his party in the later years of his administration, in carrying out his fixed determination that Madison should succeed him; but the debt was one of honor, to say the least.

Up to his own time, Madison has been the weakest of our presidents. His want of firmness led to his accepting in large part, a cabinet pressed upon him from outside, and which did not represent either his judgment or his preference. He inherited from Jefferson the trouble caused by the late embargo act, which had produced real distress among the commercial and maritime classes during the time it was vigorously enforced, and had left a sour disposition in the victims after its modification.

The non-intercourse act against France and Great Britain provided that if either power should recall the decrees obnoxious to American trade, the act should be suspended as to commerce with that power. Napoleon did this in form, though without the least change in practice; but the pretense gave Madison the opportunity of lifting the embargo as to trade with France. This left England the only ostensible offender. She had always been the larger offender; because her sea power was greater than that of France, the commerce with her was greater, and she had exercised the right of impressment in a measure that hurt American interest and feeling. Yet her sea power had been much used in protecting American commerce with herself against the confiscating decrees of



Napoleon, and in the scramble for seamen her own merchantmen and men of war had often been crippled by wholesale desertion to more lucrative American merchant service.

That Madison had much faith in the sincerity of the Napoleonic rescission is unlikely; but it gave him the occasion to put diplomatic pressure on England for a like rescission on her part, whereby, in form at least, American commerce would be restored to a good footing, legally, and lawfully exposed only to the ordinary war risks. This he believed he would be able to do, and he had fair ground for his belief. At that time, 1810, Napoleon was at his strongest, with only Great Britain and the Spanish guerillas standing out against him, and both sorely distressed. The British Government knew that the French emperor's pretended rescission of his decree was meant only to embroil England in a war with America, and though it would be hard for Great Britain to relax the fearful pressure she was exerting against him by sea, whence alone she could injure him, she would certainly have made concessions to avoid actual war. True, she was slow; but she was then fighting for her national existence, and what that means Americans have known ever since their own civil war.

However the matter might otherwise have turned out, the conduct of it was taken out of Madison's hands through his own timidity. He had removed his incompetent Secretary of State, in order to make room for James Monroe, the man of greatest diplomatic experience and capacity then in the country. But in the Congress that met in November, 1811, there was a group of young members that in time came to be known as the War Hawks. Their leader was Henry Clay, of Kentucky, than a backwoods state; a tall, blue eyed, light haired, fresh complexioned man of 34; of winning presence, engaging manners, and fascinating address. In a long public life, he was never profound; nor ever had to be, since he could talk black into being white before anybody else could demonstrate its true color. Clay had a policy; an important matter in the case of a man of such popular attributes; doubly important when he was chosen to the powerful office of speaker of the House. He was an ardent Republican, and not satisfied with the position or prospects of the party since Jefferson's weakening device of the embargo, he wished for a popular war to give the party renewed luster and power. He was a man of the West, caring little or nothing for the commerce so dear to New England; but caring much for an expansive policy that would make his country mistress of the North American continent. His plan of warfare did not require a navy, with which the United States was almost unprovided. He would strike at England through Canada and overwhelming her resistance there, would carry the northern boundary of the United States to the polar seas. Could he have begun early enough he might have succeeded; but Madison, backed by Monroe, was not to be pushed aside in a moment, and England and Canada had some little time for preparation. Had Madison resisted longer there would have been no war; for the British Government gave up its obnoxious orders against neutral commerce under pressure of the critical situation. The right of search and impressment it had not given up, and, when Monroe fell away from him on these points, Madison surrendered and war was declared.

Canada was not conquered, nor ever in serious danger; but the settled frontiers on both sides were badly ravaged, and for women and children, the aged and the feeble, the inevitable horrors of war were intensified by the rigors of climate and the hardships of a rude life in new and comparatively wild regions, as well as by the employment of Indian savages. Toronto, then called York, was captured and the provincial buildings and other public property were destroyed by the Americans, in retaliation for which Washington was captured, and the national buildings and other public property were destroyed by the British. Of martial glory, on land and sea, there was enough for both sides; more falling to the share of the Americans; but the war bore very dis-

troublingly on the United States. The difficulty of obtaining soldiers, the financial straits of the government, and the great number of Americans engaged in disloyal trade and traffic, showed how little popular affection there was toward the war. As might be expected from so feeble an administration, the mismanagement, jobbery, and corruption were frightful, and might almost excuse people for refusing to join in a profitless exercise of personal valor with the few that were in the field and afloat. The unexpected fall of Napoleon and the establishment of a strong British blockade of the American seaports led Madison to adopt a wail of despair in his communications to Congress, and as the War Hawks were by this time dismayed at the outcome of their work, there was no difficulty in pushing the measures for peace. As Great Britain had not wished the war, and could not possibly have profited by it had she been completely successful from start to finish, there was no waste of time on her part. But her plenipotentiaries would not agree to surrender the rights of search and impressment, and the American plenipotentiaries yielded the point. So the peace was made with matters left on paper as they were before. But the peace that fell upon Europe afforded no occasion for any further claim of the rights, and they expired as peacefully as though they had been given up by treaty.

The war had several important and lasting results:—

First, it renewed the American dislike of England that had measurably died out since the Revolution, and which was afterward to be fed by the accession of many foreign elements to the population, that did not look upon England as the Motherland, like the original American stock.

Secondly, it made bad feeling between Americans and Canadians, and has prevented their ever coming together in a way suitable to neighbors and relations.

Thirdly, it gave rise to the first important manufacturing interest in the United States, and so opened the door to that policy of protection against foreign competition that has ever since played a great part in our political history.

Fourthly, the glorious performances of the little American navy changed popular indifference into popular adulation, and made and has kept the United States a naval power.

Fifthly, the remarkable victory gained at New Orleans over some 12,000 of Wellington's Peninsular veterans, by a mere handful of untrained but dead-shot riflemen, brought on the reign — for it was nothing less — of Andrew Jackson; since whose time the "common people" have discarded the idea of political leadership by gentlemen born, which lasted all the way down from Washington to John Quincy Adams, and have substituted for it the extreme democratic idea of "the poor boy" as the best material for the making of Presidents.

Madison was elected to a second term while the war was in progress. The Federalists had opposed the war, and were anxious to conclude it on any terms. As "peace at any price" men they were denounced as traitors, and the name stuck to them, although their rivals made exactly the kind of peace for which they had clamored. Their convention at Hartford was controlled by the Conservative members, who did not desire a dissolution of the Union, but did desire some guarantee of fairer treatment of their sectional interests than they had received during the more than twelve years of Jefferson and Madison. There were disunionists in the convention, though they got no comfort from the resolutions finally carried. But on the heels of the convention came the news of the great victory of New Orleans, and, soon after, the more joyful news of the treaty of peace made in Europe. The Federalists were too late with their convention and their resolutions. The calamitous war had ended in a blaze of glory, and the peace they demanded had come without their procurement. So the Republican press and politicians opened on them viciously; they went down, as a party, to rise no more, and

even history has been unkind to them in misrepresenting the object and character of their famous convention. All that remain of the Federalists are the memory of their great leader, Hamilton, and their masterly organization of the government under the Constitution, which their rivals and successors left substantially untouched.

After the war, the Republicans went again into the camp of their enemy, and as they had lately filched from the Federalists their "peace at any price" policy, so they now appropriated the policies of a national bank and a protective tariff. If Madison had recalled the time when he was "Jefferson's right arm," he might have signed the bills with his left hand, out of respect to the metaphor.

PRESIDENCY OF MONROE, 1817-1825

Monroe was the proper and expected candidate of his party to succeed Madison, and an intrigue to substitute Crawford, of Georgia, for him, through a caucus of Republican congressmen, caused the downfall of congressional nomination. The Federalists were too feeble to make any public impression by their presidential arrangements; though, characteristically enough, they were found in close relation with Duane, one time editor of a reptile sheet that had vilified Washington and Adams in the interest of Jefferson, and who was now squeezed out of his party, since its rank and file had become conservative and respectable.

The Republicans, having taken up with liberal construction of the Constitution, national banking, and a tariff for protection, now added internal improvements to their program. There was a fair-sized Federalist opposition to a protective tariff, as hurtful to New England commercial interests, and to the new scheme of internal improvements, as tending to take money from the East to spend it in the West. On the other hand, there were Republicans who were still strict constructionists and revenue tariff men, and opposed to a national bank and a federal system of paying for improvements that they thought the states ought to make for themselves. So it came about that party lines became obliterated, because there was no question upon which parties could be solidly arranged. To this transitional period in our party history the political writers have given the name of "the era of good feeling."

Sectionalism, dreaded by Washington and casting repeated shadows in the days of Jefferson and Madison, came to the front in the time of Monroe. Slavery, so long apparently doomed to early extinction in the South, had at last been accepted there as its true and profitable labor system, thus changing the whole character of the problem raised by its existence. The question of admitting Missouri to the Union with a slavery constitution caused the most bitter strife that the Union had yet experienced. It was settled by the so-called Missouri Compromise, which let in Missouri as a slave state, but forbade that character to any new states north of the line of her southern boundary.

There was no opposition to the reëlection of Monroe, who had lived up to the new character of a non-partisan President, and he received all but one of the electoral votes.



CHAPTER V.

THE MONROE DOCTRINE—PRESIDENT ADAMS FAVORS HIGH PROTECTIVE DUTIES—JACKSON'S ELECTION—THE SPOILS SYSTEM AND THE KITCHEN CABINET—THE ANTI-MASON PARTY—THE LOG CABIN AND HARD CIDER CAMPAIGN—CLAY'S POPULARITY COULD NOT WIN FOR HIM THE PRESIDENCY—THE MEXICAN WAR—THE FUGITIVE SLAVE LAW—THE REPUBLICAN PARTY—LINCOLN'S ELECTION.

WHAT is known as the Monroe Doctrine was brought forward in the second term. It has a curious history. Canning, the British Foreign Secretary, was hostile to the "Holy Alliance" formed by the continental sovereigns of Europe, as a mutual aid society, after the fall of Napoleon. It had become an agency for the suppression of both civil and political freedom, and the stifling of progress. He could not strike at it in Europe; but he had learned that it was to be made a pretext for aid to Spain in subduing her revolted American colonies. Whether Spain was to retain the sovereignty of Spanish-America, or transfer it to a stronger power for a consideration, he did not know nor care. The important thing was that if the Spanish-American colonies were held to be within the objects of the "Holy Alliance," their revolt would be suppressed, if it took all the force of the great continental powers to suppress it. The same principle, applied in Europe, would, eventually, end in a coalition of the "Holy Alliance" against England, a land of liberty and free speech; and the one safe European refuge of political exiles. Canning was a proud man and an arrogant statesman, who had given the United States some hard rubs in the presidencies of Jefferson and Madison; but he had the Englishman's love of fair play, and knew the rottenness of Spanish administration. He had a frank but confidential talk with the American minister at London, who as confidentially reported it to John Quincy Adams, the Secretary of State. Adams put Canning's suggestion in diplomatic language and submitted it to Monroe. The latter worked it over and embodied it in his annual message to Congress of December, 1823, where it was well received, and thus the Monroe Doctrine was born and grew at once to manhood. It embraced two points: first, that European exploitation of the American continent, for the purpose of making conquests or founding colonies, was at an end, and secondly, that the setting up of new empires, kingdoms, or dynasties on that continent would not be permitted. Coupled with the declarations of Washington and Jefferson against foreign alliances or entanglements, it dedicated the whole American continent to American principles of government. Not Canning nor Monroe could possibly have foreseen the importance of what he was doing. The Monroe Doctrine has no formal place in the law of nations; but, without sacrificing a dollar or a man, the United States have been the acknowledged guardians of republican institutions, in America, from Mexico to Patagonia. The Spanish-American republics do not always govern well; but, well or ill, they are the undisturbed architects of their own fortunes. We may look kindly on Canning's boast that he had called a new world into existence to redress the balance of the old. Cut off by the announcement of the Monroe Doctrine from any assistance, Spain eventually gave up the struggle to preserve her American empire.

For the succession to Monroe, the leading candidates were Clay, Adams, Crawford, Calhoun, and Jackson. Crawford, Secretary of the Treasury, was Monroe's choice, and an effort was made to nominate him by a congressional caucus, but failed. It therefore became a scrub race, in which Jackson had the largest popular vote, and the largest vote in the electoral college; but not enough to elect him. The election was consequently

thrown into the House of Representatives, whose choice was limited to Jackson, Adams, and Crawford, as the three having the highest numbers of votes. Clay, fourth on the list, was ineligible, and as his political sentiments were nearer to those of Adams than of Jackson, his influence was naturally thrown to the former, and he was elected. Jackson and his faction raged and stormed and accused Clay of selling out to Adams after Jackson had refused to buy his support; but it was all false.

PRESIDENCY OF JOHN QUINCY ADAMS, 1825-1829

Clay entered the Cabinet of Adams as Secretary of State, an office then always regarded as an onward step to the presidency. Factional feeling was very bitter among the Republicans, the only one of the two parties that retained any vitality. The party began to divide into strict constructionists and liberal constructionists of the Constitution, and the Federalists sided with one or the other according to feeling or interest. The Adams and Clay factions united and took the name of National Republicans, which they afterward dropped, and called themselves Whigs. Crawford was taken out of public life by failure of his health, and his faction went over to Jackson, whose followers began to call themselves Democrats. The Federalists mainly became Whigs. In this way, the Federalist and Republican parties died, and were replaced by the Whig and Democratic parties.

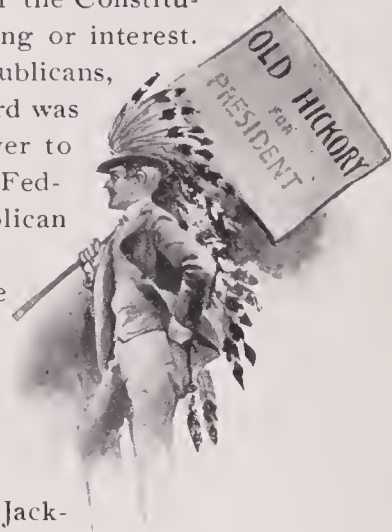
The administration of Adams was taken up by efforts to drive the already protective tariff still higher, which did not succeed till within the last year of his term. The new high tariff bore heavily on Southern interests, and Southern leaders began to turn to the old nullification theory of Jefferson and Madison as a possible means of relief.

The popular election of November, 1828, was overwhelmingly for Jackson, as everybody had long foreseen. Calhoun, who had been elected as Vice-president with Adams, was re-elected to that office with Jackson, he having gone to the Democrats in the break up of the Republican party.

In his message to Congress after the popular election, Adams took high ground for protection, and he approved bills making extravagant appropriations for internal improvements, which were carried through by combinations of local interests.

PRESIDENCY OF JACKSON, 1829-1837

Jackson had just turned sixty-two when he was inaugurated; the son of poor Irish immigrants, born in a poor settlement near the boundary of the two Carolinas, almost without youthful education, and with some small service in the Revolutionary army while still a mere boy. After reaching his majority, he set up as a lawyer at Nashville, Tennessee, and taking to politics, as a follower of Jefferson, he held some local offices. Growing in reputation he was sent to Congress in the latter part of Washington's administration, and exhausted all the command he had of the English language in abuse of that President and his measures. Then he served a short time in the Senate, but resigned to become one of the judges of the supreme court of Tennessee. He returned to the practice of the law in 1804, became intimate with Burr, and defended him through thick and thin when he was brought to trial. In 1813, he was the commander in the Creek Indian War and showed such military aptitude that he was commissioned a major-general in the regular army. His great victory at New Orleans raised him to the highest pitch of military and popular fame. Three years later he was put in charge of the discouraging Seminole War and brought it to a successful conclusion. Here he



received the nickname of "Old Hickory" that remained his popular designation throughout life. In 1823, he was again elected to the United States Senate.

That Jackson had traveled by legitimate roads from poverty and ignorance to the presidency, the foregoing summary of his public career attests. He was neither a demagogue nor a trickster; on the contrary, he was conspicuously honest and straightforward all his life. The intense hatred he inspired was due to his narrow-minded, bigoted, and wrong-headed disposition; his rash and reckless conduct; his disregard for the feelings and rights of others, and his violent, quarrelsome, and almost murderous temper. If, at some points of his career, he had been sentenced to imprisonment, hanging, or shooting, it would have been impossible to impeach the sentence for injustice, and that he escaped death at the hands of some private wielder of the knife, pistol, or rifle was his fortune and not his merit. Yet he had merit besides mere truthfulness and honesty, for he did not owe his popularity as a public man only to violence and fanaticism. Nor can his glaring and repulsive faults of temperament and behavior explain his troops of friends — few men had more and truer.

A man so unbalanced, so incapable of large views or sober reflection, so prone to act on impulse and to turn to the right when he ought to turn to the left, will, in moments of intensity, have his own headstrong way against friend and foe alike. But no man can be all or very much of the time intense, and when in relaxation, he must have a leader; yet must not know that he is being led. Jackson's leader, from the time that he became prominent for the President, was Martin Van Buren, of New York, by all odds the smoothest, nimblest, and cleverest politician of his time. Jackson, like men of his kind, was confiding, though relentless when he thought his confidence had been abused. He confided in Van Buren, he never lost confidence in him; it is but just to say that he seems to have had no occasion to distrust Van Buren, and if the latter eventually received the rich reward of the presidency because Jackson virtually had the naming of his successor, it was probably Van Buren that had enabled him to have his wild way unhurled from his acts with the proper masks of formality and decorum. Personal decorum and dignity he had no need to borrow from Van Buren. He had not reached 62 years, filling and standing before high places, habituated to professional and official etiquette, without acquiring the carriage and manner of a man of distinction. It was not a wild man of the bush that entered the White House as President. Jackson, as President, has been too often confounded with the picturesque but terrifying hordes that imagined they had come to their own in him.

Whatever Jackson believed he treated as a proved fact. His erroneous belief that he had been cheated out of the last election in the House of Representatives made him rancorous toward public men whom he might have personally esteemed to the advantage of everybody and everything. His erroneous belief that the Bank of the United States had been politically active against him led him to a savage warfare on it that formed the chief event of his presidency, and dragged down many innocent people in its ruin. In the late campaign, his early life and character had been dug from their graves and used as stalking horses to frighten people, with many lying additions. Villifications was a political game that he had played at himself, and a true statesman would have put all the evil memories of the campaign behind him and looked only at the future. Jackson's measure of statesmanship was contained in his closing retrospect of all his friends rewarded and all his enemies punished.

Jackson took over from his political friends of New York and Pennsylvania the "Spoils System" devised by his old friend Burr, under which public office and employment were attached to the party machine. Its gradual extension through all the ramifications of national, state, and municipal governments made government in the United States very expensive, corrupt, and inefficient.

Jackson was the inventor of the so-called kitchen cabinet, a clique of personal friends freed from the responsibility attaching to great office, possessed of a sinister influence to advance their own interest at the public cost, and whose function consisted in guarding and forwarding the political fortunes of their master in ways that responsible statesmen could not pursue.

The great act of Jackson's presidency was his dissipation of the cloud that hung over the Union when South Carolina sought to nullify the tariff acts that bore so oppressively upon her. Jefferson and Madison had supported the right of nullification by a majority of states, and the Federalists of New England had contended for the right of secession; so that the act of South Carolina was not revolutionary, however objectionable otherwise. Popular imagination likes to dwell on a supposed threat of Jackson to hang Calhoun, the leading advocate of nullification; but Calhoun was never in personal danger from Jackson's sentiment, and it was Jackson's own sacrifice of his friendship for Calhoun to his preference for Van Buren that prevented him from an intercourse with Calhoun which might have avoided the crisis. Jackson's firmness gained time for a surrender to South Carolina on the question of the objectionable tariff, and when that unquiet state next appeared as a dissenter, in 1860, it found nullification so dead that it logically resorted to the old New England project of secession, as the only remaining means of controlling the Union.

Strict constructionists of the Constitution had originally been doubtful of Jackson, but his opposition to the appropriation of national revenues to internal improvements restored their confidence. Yet when he found large majorities in both Houses of Congress wedded to such appropriations he accepted Van Buren's advice and yielded, and there was no more trouble on that score.

Jackson was reëlected, over Clay, in 1833. In this campaign, for the first time, all nominations were made by national party conventions. A third party was in the field, the Antimasons, whose stock in trade was the proposition that freemasonry was a lawless and dangerous secret society. This struck equally at Jackson and Clay, both eminent freemasons. Antimasonry made a great stir for a few years and gained some notable local successes. This is the common history of all third parties. The popular vote indicated that if all the opposition to Jackson could have been consolidated he would have been defeated. But a consolidated opposition would hardly have obtained so large an aggregate vote.

Nullification did not wholly fail in Jackson's time. In defiance of Federal treaties and a decision of the Supreme Court, Georgia had laid violent hands on the Cherokee Indian lands within her limits, and all that the general government could do was forcibly to tear the Cherokees from their home and settle them on the Federal domain in the far West. Even with Jackson at the helm, the Union was not under full control of the steersman.

The war on the bank, the excessive diversion of capital and industry to manufacturing under the stimulus of high tariffs, an eager speculation in unsettled western lands, the flooding of the country with the paper money issues of a swarm of "wild cat" banks, were preparing a great crash in the financial and commercial worlds. This was assured and hastened by Jackson's sudden policy of discontinuing the acceptance of bank bills in payment for public lands and of public dues, and requiring actual gold and silver, and by the ruinous losses of a great fire in New York. But Jackson got out before the storm actually broke, so that he left office the most powerful and popular of Presidents, and turned the succession over to Van Buren as easily as though the presidency had been his private property.

As the first man of the people to attain the presidency, and with his figure standing so strongly out from a lurid background, Jackson has taken hold of the popular

imagination in a way not warranted by either the facts or results of his political career. It is a hard fate for Jefferson to have Jackson's name so often linked with his own as though they were the two apostles of democracy.

Four years of hard times under Van Buren proved more than the Democratic party could withstand. The new President showed much political capacity, carrying measures by which the government moneys were collected, kept and disbursed by public officers, and reserving the public lands from speculation, for actual settlement. He was deservedly renominated by the national convention of his party. But the public and private distress favored the Whigs, and seizing that opportunity, they enlarged it by borrowing the stage trappings and thunder of their enemy. In the person of old General William Henry Harrison, living in retirement in a log cabin in the western wilds, and socially refreshing himself and his friends upon hard cider, they found a new Jackson, and a better one for campaign purposes. He was even more a man of the people than Jackson in his simple life and surroundings, and his military reputation could be furbished up to an equal brilliancy. For his great victory over the Indians had been decisive upon the fortunes of the West, Tippecanoe was a better name to play upon than New Orleans.

A Jacksonian candidate required a Jacksonian setting, and the "Log Cabin and Hard Cider Campaign" of 1840 became the greatest popular craze that ever attended a struggle for the presidency. It was the beginning of monster meetings and spectacular parades as means of arousing party enthusiasm and dismaying the enemy.

Harrison, as President, lived but a month, and was succeeded by Tyler, the Vice-president, more of a Democrat than a Whig, and put on the ticket to win votes from the Democrats in the time of their distress.

The Whig policies were, a protective tariff, to diversify industry and build up seats of manufacture as home markets for the farmer; fishery bounties, to assure a supply of seamen to the navy in time of war; generous aid to interstate roads and canals, to facilitate traffic and trade, and help to populate the interior of the country; a national bank, with branches everywhere, to make the whole mass of money and credit available to business under safe conditions; a liberal construction of the Constitution in all matters of general welfare, and the keeping of the slavery question out of policies by adherence to the Missouri Compromise. The late victory was taken as an affirmation of these policies; but Tyler, the unexpected President, was a Jeffersonian in politics, and being an honest, conscientious man, he could neither go the pace nor follow the direction set for him by his nominal party.

The Whigs repealed the independent treasury act, under which the public revenues were withdrawn from the uses of trade between the times of their collection and disbursement, and they got a small modification of the tariff law, in the interest of protection. They were not strong enough to pass their other measures against the resistance of Tyler, and spent the time in quarreling with him, a situation that enabled the lately prostrate Democrats to raise their heads.

Clay was the unanimous choice of the Whigs for the succession to Tyler, and Van Buren had a decided lead for the Democratic nomination. Tyler, who had been coquetting for that nomination, threw his trump card in the form of a treaty for the annexation of Texas, which was hailed with delight by the southern Democrats as affording material for several slavery states, by which to preserve their strength in the Senate. Van Buren took the same ground as Clay, that to filch from Mexico her filibustered province would be dishonorable, and could lead only to a dishonorable war. Cass, of Michigan, his rival for the nomination, was ready to swallow the dishonor in exchange for the nomination; but when Van Buren found that he could not be nominated himself he sprang the first "dark horse" of presidential nominations upon the convention in the

person of Polk, of Tennessee. There was a stampede to Polk, and the news of his "enthusiastic" nomination was sent from Baltimore to Washington over the experimental telegraph line that Congress had paid for on the solicitation of Morse, the painter of congressional portraits.

Clay was the most popular public man in the country; even Jackson had not known what popularity was in comparison with Clay. Polk was a respectable nonentity, whose name was first heard by tens of thousands of voters after he had been nominated. Yet he beat Clay; or rather the Abolitionists beat Clay by putting up a candidate of their own because he fenced with the slavery question, and their ticket drew enough votes from him to throw the election to Polk. Clay once said that he would rather be right than be President, but if he had said he would rather be right and also be President he would have stated his position with a nearer approach to accuracy. His hunger for the presidency more than once obscured his notions of what was right.

The slavery interest carried the annexation of Texas after Polk became President. By Mexican law, slavery was prohibited; but all the anti-slavery men could extort was the extension of the Missouri Compromise to the new state, prohibiting slavery north of the line of the south boundary of Missouri. Mexico was too weak from civil war to do more than protest and break off diplomatic relations with her powerful despoiler. According to Mexican contention, the boundary line between Texas and Old Mexico was the river Nueces, but the annexationists claimed to the Rio Grande. Polk sent a military force to occupy the disputed territory, and so forced a war. If slavery was never to go north of the southern line of Missouri, it was only a question of time when the settlement of the almost boundless free territory would give the free states a preponderance, and then slavery would be doomed. So slave-holding eyes were turned to Spanish-America as a promising field from which to carve out more slave states.

The war with Mexico was ignobly conceived and, so far as the politicians were concerned, ignobly conducted. General Taylor's early victories made him too popular, so General Scott was sent to the seat of war, and Taylor reduced the inaction by transferring his troops to Scott. The latter was also successful, and as he was a Whig and dangerous, the administration devised a plan for making Senator Benton, of Missouri, a lieutenant-general and giving him the chief command. Benton was a man of coarse fiber, but the fiber was honest. He would not lend himself to a scheme designed only to assure the insignificant Polk a second term. This second term for a President is one of the crying evils of our political system. It puts a strain on human nature that is beyond the power of human nature to bear.

While the Mexican war was going on, a third war with England was invited by the Whigs forcing the Democrats, upon reproach of want of patriotism, to take extreme ground on the disputed question of the Oregon boundary. War was averted by the unwillingness of southern politicians to force a doubtful claim simply to add more free territory to the already existing superabundance. A compromise boundary was fixed by treaty.

Under Polk a low tariff act was passed, and a bill appropriating money for river and harbor improvements vetoed as transcending the constitution, since it proposed to spend federal money within the boundaries of states.

Polk sought to end the war with Mexico, and so get rid of victorious generals, by payments of money. But the slavery question blocked the way and nothing was effected. The war was ended by American victories, the United States thereby acquiring New Mexico and California.

The national convention of the Democratic party nominated Cass as the successor of Polk. The Whig party, putting aside Clay, its idol, and Webster, its intellectual giant, took up with Zachary Taylor, the popular hero of the Mexican War, commonly

known as "Old Rough and Ready." He had no political views whatever, but was willing to be a Whig, if nominated. If not, he let the Whigs know that he meant to run independently, on his military record. So they took him, as their only chance of beating the Democrats.

Cass was the candidate of the slaveholders and the "Doughfaces," the latter being "Northern men with Southern principles." A secession from the Democratic party of so-called Free-soilers nominated Van Buren for the presidency. He accepted the nomination upon a platform of principles at war with his whole career. His candidacy defeated Cass, and so achieved its purpose. Third parties are always scoffed and derided by the "regulars" of the two great parties, but they had now twice successively defeated the dominant big party. This time they elected Taylor.

When Polk had obtained an appropriation from the House to put territory from Mexico, Representative Wilmot of Pennsylvania, had carried a proviso to exclude slavery from any territory so purchased. This had killed the bill in the Senate, where slavery was entrenched. But the Wilmot proviso survived and made its way into every question of organizing the new territory of the Union, whether Oregon, California, or New Mexico. In the press, at political meetings, and at party conventions, as well as in the congressional debates, the proviso was forever in evidence. The Democrats would have nothing to do with it, because they were under slavery influence. The Whigs flouted it, because it trenched upon the Missouri Compromise, their compact of eternal peace. But it went on with its work of gradually dividing the North and South sectionally on the slavery question. Northern Democrats became Free-soilers and Southern Whigs became regular Democrats. The regular Whigs, depleted at the South and making no gains at the North, disappeared as a party as soon as a new party, dedicated to freedom, arose in the North.

During the little more than two years that he lived, Taylor proved a good President. Though a southern slaveholder, he kept free of sectionalism and class interest. He was an honest, straightforward soldier, and spoke his mind like a general-in-chief. His successor, Fillmore, was an anti-slavery man, but was willing to make concessions for the sake of harmony. Clay, the conjurer, carried through the last of his compromises. Texas was admitted as a single state, with slavery, and her debt assumed. California was admitted as a free state. The territories of New Mexico and Utah were organized, with slavery or no slavery left to their own inhabitants. Slavery was retained in the District of Columbia, but slave auctions abolished. A stringent fugitive slave law was passed.

The fugitive slave law proved too stringent. Negro chasing in New England streets was too much for New England blood, and led to riots. Clay having dispensed with jury trials for alleged fugitives, state laws provided them, and the juries were apt to side with the runaways. What Seward called the "irreconcilable conflict" was upon the country, and henceforth there were to be no national politics but the one issue of slavery.

General Cass was again the leading Democratic aspirant for the presidency, but Marcy, Buchanan, and Douglas had their friends. Matters were running favorably for the democracy, while the Whigs were going from bad to worse. They still had Webster, the grandest, most majestic orator that the country had produced, and one of the greatest orators of any place or time. Clay's retirement from mortal illness had given Webster his chance, but a notable speech intended to placate the southern Whigs turned the northern Whigs against him.

In the end the Democrats nominated a "dark horse," Franklin Pierce, and the Whigs nominated Winfield Scott, the commanding general of the army. Pierce won easily.

Under Pierce, a bill was passed to organize the territories of Kansas and Nebraska, with a declaration that the Missouri Compromise had been superseded by Clay's latest compromise. Though the bill made trouble in the Democratic ranks, they were finally rallied to its support. But it was the final blow to the tottering Whig party. When the struggle was over, only the name was left, and that in charge of a feeble southern remnant.

Relieved of Whig opposition, the slavery men were aggressive. With permission from Washington, the American ministers at London, Paris, and Madrid met in Belgium, and drew up a declaration that Cuba was so necessary to the United States that Spain should either sell the island or have it taken from her by force.

As the people of Kansas were to decide the question of slavery for the future state, a furious and bloody struggle occurred with southern and northern help, for the control of the territory. Pierce favored the slavery side, and helped it with proclamations and troops; but the North sent actual settlers, while the South sent only pretended settlers to force admission of the territory as a slave state, and the Free-soilers won in the end.

Before the close of Pierce's term, the anti-slavery men had formed the new Republican party. Its declared object was to fight the extension of slavery. Its first candidate was John C. Fremont, whose political principles were a matter of doubt, but who was a favorite with a large contingent of Know-nothings who had come to the Republicans when their own meteoric party had run its brilliant and swift course. This was the secret, oath bound party that had proposed to choose only native Americans to office and fight the Roman Catholic church. The Democrats nominated Buchanan, senior member of the conference of ministers on the acquisition of Cuba. There was a Whig nomination of Fillmore, the late President Buchanan was elected, but the Republican popular vote was very large, all circumstances considered. Fillmore got many votes for conservative reasons, that otherwise would have gone to the Republicans.

Immediately after Buchanan's inauguration, the Supreme Court announced its decision in the case of Dred Scott, the slave of an army officer who had taken him from Missouri into the free state of Illinois and thence into the free Territory of Minnesota, and at last back to Missouri, where he was treated as a slave. Dred sued his master for damages for an assault, claiming to be a free man and a citizen of Missouri. The court held that the descendants of African slaves were not citizens and had no legal rights but such as were especially granted them, and dismissed the case for want of jurisdiction. But in order to settle the slavery agitation, a majority of the court went on to declare, quite beyond the necessities of the case, that under the Constitution a slaveholder had as much right to carry his slaves about the Union as any other property. On this point, the minority of the court, while denying that the question was before the court for decision, contended that slave property was exclusively a matter of state law, and that there was no federal law to guarantee its security when the state law ceased to operate.

The Dred Scott opinion — for the exciting part of it was not a decision — furnished the opponents of slavery with an argument for making it a local institution by political means, since the law had failed them.

Everything also failed the slavery cause. It had got nothing out of the shameful war with Mexico. It could not get Cuba, because the North would not have it, and Great Britain and France had joined in warning Buchanan not to attempt as President, the force he had proposed, while a diplomatist, to use against Spain. It tried filibustering in Cuba and Central America and had lost its investment. Its Northern allies were growing weaker in numbers and decidedly weaker in spirit.

The free states were multiplying and prospering and would soon be in control of the national government. The Southerner, Helper, in an impressive book, warned his

fellow Southerners that their section was going backward in civilization under the blight of slavery. They were still battling in Kansas, but it was a losing battle. The stars in their courses were fighting against the South, but the South was not dismayed. When the worst came, they could withdraw from the Union and set up a white man's republic, with a slavery free to all whites who could buy or import a slave.

Forty years had now elapsed since slavery had first raised its head in politics, to battle for public attention with high tariffs, internal improvements, and liberal construction of national powers, as advocated by that section of the then Republican party which had begun to take the name of National-Republicans and which was ultimately called the Whigs; and with low tariffs, no local improvements at national cost, and strict construction of national powers, as advocated by that other section known as Democratic-Republicans, and afterward as Democrats. The question of slavery had indeed presented itself in the constitutional convention of 1797, but it was quieted at that time by a series of compromises based on two considerations; first, that it was a dying institution which, in course of time, would take itself naturally out of the way and, secondly, that if not kept out of popular discussion by compromises, well adjusted within the convention, it might prove to be the last straw to break the camel's back when the Constitution should go out to the states for ratification. Hence the nineteen delegates from the free states, and the nineteen from the slave states, who signed the draft constitution, in addition to Washington, who signed as President, mutually sacrificed personal feeling and preference in a common endeavor, which proved successful, to prevent the slavery question from further increasing the burden of getting nine out of the thirteen states to adopt the Constitution and so put it in operation at least among the ratifying states. But when twenty-two years afterward, the people of Missouri demanded admission into the Union with a state constitution recognizing slavery, the dying institution had taken a new lease of life, had already established itself as the social and industrial bases of the cotton growing states, was rapidly extending itself over that part of the national domain suitable for the cotton cultivation, and was now feeling the need of a larger recognition and protection than had satisfied the slave states at the time of the constitutional convention. In short, cotton, as a staple of production, and slavery, as a staple system of labor for the production of cotton, had become so linked together that nothing but violence could separate them. From North Carolina down to Florida, along the seaboard, and thence inland over Alabama, Mississippi, Louisiana, and Arkansas, the American Commonwealth, dedicated to liberty, and based upon democracy, was forever to offer the spectacle of the workingman as a member of a barbarous and servile race, the slaveholder as a territorial and personal lord, and the "mean," or slaveless, white as a shiftless dependent upon the slaveholding autocrat and aristocrat.

Bordering on the cotton states would be Virginia, Kentucky, Tennessee, and Missouri, with industrial systems not resting exclusively upon slavery, but so bound by interest and feeling to the cotton states as always to be counted with them in casting the political balance between the forces of freedom and slavery. In the free states, labor, being voluntary and intelligent, was honorable and attractive, and a true condition from which to rise to higher things, while in the slave states, labor was to be the forced task of a degraded and alien people, doomed to gross and perpetual ignorance as a necessity of their state of bondage. As Lincoln afterward said, a commonwealth attempting to rest itself upon two such conflicting social systems was "a house divided against itself," and as Seward afterward described the situation, it was that of "an irreconcilable conflict between opposing and enduring forces." Nobody can properly understand the political history of the United States who does not realize that the nation was founded in freedom, with temporary indulgence of what was universally regarded as a transient phase of society in those states where African slavery had

planted itself in colonial days. Jefferson was a large slaveholder when he drafted the Declaration of Independence and asserted the divinely given equality and liberty of "all men," but Jefferson believed that slavery was, and ought to be, a stage on the journey to universal freedom, and when, later, he saw a disposition to adhere to slavery as a permanent and defensible system of the relation of man to man, he dared to say openly that he trembled for his country when he remembered that God was just and that his justice did not sleep. From Jefferson to Calhoun was so tremendous a stride as to make the slavery issue the greatest political question with which the American people have been confronted in their whole national career. Though, by one of the compromises of the Constitution, every five slaves were counted as three persons in fixing the representation of the slave states in the popular branch of Congress, it soon became evident that the free states would gain, and keep, the control of the House of Representatives. For this reason, the policy of the adherents of slavery as a permanent institution became devoted to two objects; first, to increase the number of slave states so as to retain control of the Senate and prevent hostile legislation, and secondly, to exclude slavery from the lines of division between political parties, so that no president hostile to slavery should ever come into possession of the executive power.

These two motives explain the whole slavery struggle, from its inception in the contest over the admission of Missouri, to its termination by the Civil War. The desire, in 1819, to bring Missouri into the Union as a slave state, though it lay north of the tacitly accepted parallel of latitude dividing the free and the slave states, was to add two slave state members to the Senate. The desire was accomplished, but the line of division was reëstablished, by agreement, for all future time, and that, with the device of balancing the admission of a new free state with the admission of a new slave state, or the reverse, kept the peace for many years. But as the free states grew, the Missouri Compromise failed to meet the necessities of the slavery interest. In the quest for territory out of which to make new slave states, it went filibustering into Texas and brought on the Mexican War, from which it gained only two senators instead of the eight counted upon. It went filibustering into Cuba, and failed; and it went filibustering even into Central America, and failed. After these failures came one of the most astonishing incidents in our political history. In 1854, with the consent of President Pierce, a citizen of New Hampshire, and, at the instigation of Secretary Marcy, a citizen of New York, James Buchanan, of Pennsylvania, our minister at London; John Y. Mason, of Virginia, our minister at Paris, and Pierre Soule, of Louisiana, our minister at Madrid, met at a Belgian summer resort, and drew up a joint dispatch to Marcy, intended for use as a pro-slavery document and therefore made public for that purpose, advising that Spain should be asked to sell Cuba, and suggesting that in the event of her certain refusal, it should be taken from her by force, "if we possess the power." Cuba was wanted as a landing station for a reopening of the slave trade, and to cut up into states to increase the slavery representation in the Senate.

This "Ostend Manifesto" excited indignation in the free states, and disgust in Europe. When Buchanan became President, Spain appealed to the French emperor, and he engaged the British Government in a joint notification to the free state allies of slavery, then in office at Washington, that official filibustering in Cuba, in the interest of slavery and the slave trade, to be carried on by an American army and navy, and under the American flag, would not be permitted. Thus a project begun in shame ended in humiliation, and though the military power of the government was brazenly used under Pierce and Buchanan in the attempt to force slavery upon Kansas, the more important slavery designs upon Cuba were frustrated; and by intensifying anti-slavery feeling at the North, they hastened the downfall of the whole system. As the great Federalist party had been destroyed by the alien and sedition laws under John Adams,

and by its opposition to the War of 1812, in the time of Madison, so its successor, the great Whig party, had been destroyed by pandering to the annexation of Texas under Polk, and by promoting the fugitive slave law under Fillmore. In its place had sprung up the new Republican party, composed of all sorts and conditions of men, politically speaking, but brought, and held, together by glowing indignation at the doings in Kansas, and at the slave-catching, at the national expense, throughout the North. This new party had given to Buchanan and the Democrats a hard race for the presidency in 1856, and it grew rapidly in strength during his administration. On the other hand, everything went against slavery, and against the Democrats, who, North and South, were now distinctively the slavery party. In the Dred Scott case, the Supreme Court, by a pro-slavery majority, held that slavery was a national institution, lawful everywhere, despite state laws; that even free persons of African descent could not become American citizens, and that the Missouri Compromise, prohibiting slavery north of a certain line, was unconstitutional and void. This threw the whole slavery question back into politics. In Kansas, freedom triumphed over the combined power of slavery and the national government. The vengeful treatment of John Brown and his insignificant followers had made of them heroes and martyrs of liberty; and though the Democrats were everywhere hard-pressed in the free states, their slave-state brethren, having the law, the courts, and the government, on their side, were forcing the fight for slavery ascendancy along the whole line.

For the Democratic nomination of 1860, Douglas, of Illinois, popularly known as the Little Giant, was the leading candidate. He was an experienced and clever politician, and politics being his trade and the presidency his aim, he had wasted no time on principles, but had become the archpriest of expediency. Even before the Dred Scott decision, he had invented the doctrine of squatter sovereignty to release the slaveholders from the fetters of the Missouri Compromise and to enable them to "jump" a territory north of the slavery line long enough to convert it into a slave state, if they could find the money and men with which to do it. Douglas was the only Democrat that could possibly be elected to succeed Buchanan, and if he should get the nomination, he was sure of the vote of every slave state in the Union. But the vote of the slave states alone would not elect him, and the problem was to get his slave state friends to be meek enough until after the election to enable him to carry some of the large free states. In the interest of his candidacy, he had felt obliged to oppose the extreme measures of the Buchanan administration in Kansas, and the administration was, in consequence, his enemy, so that the officeholders, the most active of politicians, were against him, and ready to fight his nomination. Thus his contest for the great office which he alone of the party could gain, began in the party itself, and over the preliminary question of his nomination. The national convention met at Charleston as early as the latter part of April, 1860, and the struggle that at once began proved that Douglas had the majority. There were contesting delegations from the great states of New York and Illinois, and his delegations were seated. There was a long wrangle in committee over the platform, resulting in a majority platform upon which Douglas could not run in the North, and a minority platform upon which he thought that he could; and the minority platform was adopted by the convention. It declared for the acquisition of Cuba, and denounced free state interference with the fugitive slave law; those were its only concessions to the slavery demands. Thereupon a large number of Southern delegates withdrew, and after a session of ten days, with nothing accomplished, the convention took a recess until the latter part of June, at which time they were to reconvene at Baltimore. At this second meeting, an attempt was made to reunite the party, but it failed, and Douglas was nominated by one faction, and John C. Breckinridge of Kentucky by the other. Thus slavery, which had destroyed one party and had

even split the church organizations, at last split the party which had served slavery faithfully until it could go forward, as a unit, no longer. For a quarter of a century, the party of Jefferson was of no further consequence in national politics; but slavery did not actually destroy it, as slavery had completely destroyed the Whig party during the administration of Pierce. From the days of Jefferson, its founder, to those of Bryan, its latest expounder, the Democratic party has never shown marked ability, except when Van Buren managed it for a short time, under cover of Jackson as President, and when Cleveland dominated it in his first administration. But it lives on, in sunshine or darkness, upon a few fundamental principles which endear it to the masses and make it enduring, and every now and then the government is put into its charge while the other, and abler, party, drunk with power or corrupt with plunder, recovers itself in the chilling and pinching shades of opposition, and comes back with saner mind and some feeling of conscience.

With two candidates, and hopelessly disrupted, the Democrats were out of the presidential race before the campaign of 1860 opened. A convention of Unionists, which sought to revive the old Whig policy of excluding slavery from politics, put up a presidential ticket, composed of John Bell of Tennessee and Edward Everett of Massachusetts, and those who were for the Union with or without slavery could quiet their consciences by voting that ticket. But the victory belonged to the Republicans before the battle was fought, and popular interest centered upon their national convention. With Seward, of New York, as the one only possible candidate, by the irresistible logic of events, and with certain success ahead, the convention ought to have been tame; but it proved to be the opposite. The certainty of success made the rings and factions that were not of the circle of the great leader the more anxious to snatch the nomination away from him, and to fight and traffic and bargain for it among themselves. It was not without reason that the New York delegation came to the great wigwam at Chicago with a force and power and display never before equaled, and rarely since surpassed. Greeley of the "Tribune" had been waiting for just this chance to settle an old score with Seward, and years of bitter nursing of his alleged wrongs at Seward's hands nerved him to the greatest effort of his life, to put down the man who was now on the very threshold of the presidency. That he did deadly work against Seward is sure, but Greeley alone could not have defeated him. What defeated him was the fear of many of the late free-soil Democrats, and conscience Whigs, that Seward, in his high place as the anti-slavery leader in politics, had been too radical, to run well with that great mass of Northern people who wished slavery to be made reasonable and to be kept were it belonged, but who had no aggressive feeling about it and who longed for peace. In other words, Seward was too great and too conspicuous to stand the nibbling away process of a presidential campaign. He had a record and a distinctive one, and there was at least the possibility that, with his emphatic anti-slavery record as a lever, Douglas, who did not wish to "vote slavery either up or down," and who had no wish about it except to keep it out of the Democratic party, might beat Seward; for Douglas had a large personal following, and was just the sort of candidate to appeal to conservative instincts all over the Union.

Seward killed off by revenge and cowardice, there was not another single candidate who, for availability, could measure, in the slightest degree, with Lincoln, of Illinois. This the friends of the latter had foreseen; and making no enemies for him while the fight over Seward was in progress and undecided, they had quietly made preparations to stampede the convention to him when Seward should be out of the way, even going so far as to pack the spacious gallery with Lincoln shouters whom the convention officers would not be able to silence, and having at hand an express supply of Lincoln split fence rails, to be carried in procession about the wigwam when the moment for stam-

peding the convention should arrive. If Lincoln was naturally Seward's dark horse, the Lincoln men did not mean to leave an opening for the thrusting in of a dark horse between Lincoln and the convention after Seward had vanished, and their ample precautions were crowned with success. With Seward gone, Lincoln was the proper nominee, and the stampede and tomfoolery cleared away the long-drawn excitement, and did no harm.

Lincoln proved a popular candidate with his party, and his personality grew stronger and more attractive as it came under the calcium light of a presidential campaign. His ungainly figure and dress, and his homely ways, lost him no votes. His rugged face was anything but repulsive when it grew familiar, and as to the allegation of his being a fool or a buffoon, it crumbled upon reading his speeches in the joint debate with Douglas, in 1858, and his Cooper Union speech at New York, in 1860. When the ballots were counted, the aggregate popular vote for Douglas, Breckenridge, and Bell, greatly exceeded the vote for Lincoln, so that the latter was coming into a troubled presidency with the disquieting knowledge that a striking majority of his fellow citizens did not wish him there. The significance of the popular vote was no more lost upon his opponents than upon himself; it made them aggressive, and it made him careful, for he understood that he must win confidence in order to sustain his position.

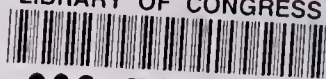
Before the election, South Carolina had announced her purpose to withdraw from the Union if the electoral vote should be for Lincoln. On the previous occasion of her supreme discontent, she had applied the Jefferson plan of staying in the Union and forbidding the execution within her bounds of its unacceptable laws. Only the great name of Jefferson had made the doctrine of nullification respectable, and its absurdity came home to all when South Carolina followed it in Jackson's time. She now resorted to the more rational doctrine of going out of the Union, as contemplated by New England during the oppressions of Jefferson's and Madison's administrations. True, there was a question about the constitutional right of secession, but it had been open and unsettled from the beginning, and could not be decided until an actual case should arise. It arose now with the secession of South Carolina, and though men generally, including many of South Carolina, were sorry to see a breach in the Union that had done more good, and that had lasted longer, than was originally expected; there was no strong feeling, except in South Carolina itself, which had been dissatisfied with the Federal system for many years. In a message to Congress, President Buchanan went carefully into the constitutional legality of secession and pronounced against it, but neither could he find any constitutional warrant for Congress or the President to coerce a seceding state. If he had, it would have made no difference, as the North was against coercion, and the cotton states were all following the example of South Carolina and arranging to form a new republic among themselves, with slavery free to all whites who could buy and keep slaves. So far as he could, President Buchanan was constitutionally bound to hold on to all the national property in the seceded states; but that made no trouble for either side, since he had not the means to hold on to much, and the Southern intention was to come to an accounting and a settlement, as soon as the separation of all the states that in the end should decide to withdraw had been effected. The case of the border states was more troublesome all around. Their slavery interests were not large enough to justify secession; they were more bound up with the free states than were the remoter cotton states; the free states would feel their secession to be much more of a wrench; and if Maryland was to go out with the rest of them, as she almost certainly would, even the national capital would have to be abandoned to the new republic. On the other hand, the cotton states would not feel satisfied with their experiment unless Virginia, Kentucky, and Missouri, as well as Tennessee, could be

2039

24



LIBRARY OF CONGRESS



0 038 701 680 6