The New Encyclopaedia Britannica

THE INDEX

L–Z

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How to use the INDEX

The INDEX to volumes 1 to 29 begins on page 1 of this volume. The INDEX is the result of an accumulation of hundreds of thousands of references locating precisely the section of a page in which a person, place, thing, or idea is mentioned in any of the thousands of *Encyclopadia Britannica* articles. These references have been assembled, combined, edited, and alphabetized to make an INDEX of more than 400,000 references. This INDEX gathers together all the topics covered by the more than 40,000,000 words in the text, sorts them out. and tabulates them for much the same reason that roads and signposts are planned and built in an unfamiliar country.

Encyclopadia Britannica is so vast a work that it cannot be used to greatest advantage without first consulting the INDEX. For example, if readers turn to "United Kingdom" in Volume 17, they will find a long article, but this by no means represents all the information in *Britannica* about the United Kingdom. To find all of this material, readers must go to the INDEX, where, under the entry heading "United Kingdom," they will find not only the reference to the main article but also about 1,000 references to many related articles throughout the 29 text volumes of *Britannica.*

Or readers may wish to learn something about, say. joint disease. If they look in MICROPAEDIA Volume 6 at the appropriate alphabetical position, they will not find an article on joint disease. The INDEX, however, lists references to three other articles in *Encyclopadia Britannica* in which information on joint disease may be found.

Readers who turn to the INDEX first will use *Britannica* most intelligently and profitably. Because the purpose of the many thousands of INDEX entries is to classify, clarify, and search out specific information, much attention has been given to their simplification. All entry headings, regardless of the number of words they contain, are considered single headings and are alphabetized word by word according to the INDEX alphabetization rules explained at the end of this Introduction.

Entry headings for towns are followed by abbreviations giving the country, state, or other political subdivision in which the towns are situated. Names of lakes, rivers, and mountains are identified as physical features. Persons are often identified in parentheses by nationality or profession or both. Entry headings having identical spellings are usually followed by a parenthetical descriptive word or abbreviation. In the case of entry headings under which scores of references appear. the references are grouped under subheadings. For example, country articles usually have such subheadings as agriculture, forestry, and fishing; commerce and industry: education; history; etc. These subheadings are also arranged alphabetically.

In addition to containing entry headings that have volume and page references, the INDEX has thousands of cross-references. Cross-reference entries for alternative spellings and titles send readers to the main spelling or title. For example, the cross-reference "Constantinople: see Istanbul" means that all references with information about Constantinople will be listed under Istanbul. It is important to remember that cross-references in the INDEX refer only to other INDEX entries.

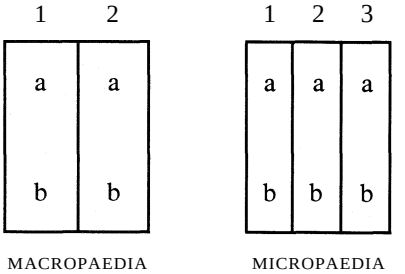
At the top of the outside column of each page of the INDEX is a key word or heading that identifies, on the left-hand page, the first entry or, on the right-hand page, the last entry. These enable readers to find more readily the subjects included on the two pages. Readers are also urged to study the Index Rules, which immediately follow this Introduction. There they will find detailed discussions and examples of the rules concerning geographical entries, references to illustrations, and so on. A List of Abbreviations used in the INDEX follows the Rules.

Index Rules. In the following INDEX, entry headings are set in boldface type, flush with the left-hand margin in a column; they are followed by an identifying phrase or word in parentheses. If the INDEX entry has a corresponding article in the text, the volume and page number of that article immediately follow the entry heading and identifier, on the same line if space permits. Subordinate to the entry heading are the subheadings referring readers to other articles containing information on the subject. These subheadings have a short phrase indicating the context in which the information will be found and are indented to indicate different levels of subordination.

Flaubert, Gustave (Fr. au.) **4**:821:3a
major *ref in* French Literature
19:580:2b
association with
Colet **3**:449:2a
Du Camp **4**:242:2b
James **6**:486:1a
Maupassant 7:952:1a
biography by Sartre **10**:460:3b
25:638:1b
development of Realism **9**:973:3a,
18:792:2b, 794:1b
literary style **23**:89:1b
"Madame Bovary" **7**:402:2b;
23:127:1b

Entries in quotation marks denote titles of written material and works of art, such as books, paintings, newspapers, symphonies, etc.

All references to text articles in the MACROPAEDIA and MICROPAEDIA show the volume, page number, column of the page, and a letter "a" or "b" indicating the upper or lower half of the column. For example, **1**:485:3b points to the MICROPAEDIA Volume 1, page 485, the third column of the page, and the lower half of that column.



References to the PROPAEDIA volume may be entered on the first line under an entry heading and refer to the PROPAEDIA division or part in which the subject is broadly covered in the outline of knowledge.
Examples:

see PROPAEDIA: Part Three
see PROPAEDIA: Part One, Division II

They may also be placed at the end of an index entry in the following form:

fur a list of related subjects see
PROPAEDIA: Section **421**

(In this example, 421 denotes a section number, not a page number.)

References to the **BRITANNICA WORLD DATA** occur in the following form:

see BRITANNICA WORLD DATA for statistical information.

Illustrations. Illustration references are preceded by the italicized abbreviation *illus.* If the illustration is a list, map, table, or chart, the reference is preceded by the italicized word *list, map, table,* or *chart.*

Alphabetization. The **INDEX** uses the word-by-word system of alphabetization (where a word is defined as one or more characters separated from the next one or more characters by a space). When one word differs from another only by the presence of additional letters at the end, the shorter word precedes the longer (*e.g.,* "gold" precedes "golden"). Entry headings consisting of more than one word are alphabetized among the single-word entries according to the first word, so that, for example, all of the entries starting with "gold" will be alphabetized in sequence. Entry headings having the first word in common (*e.g.,* "Gold Coast," "Gold Cup") will then be alphabetized among themselves according to the second word. Entry headings having three or more words in common follow the same principles.

Following is a set of examples:

gold
Gold, Helen
Gold, Thomas
Gold Coast
Gold Cup
Goldbach, Christian
Goldbach problem
Golden
Golden Gate
Golden Gate Bridge
Golden Gate Park
Goldenberg, Harold Mark

Diacritical marks do not affect alphabetization. If a diacritic is the only difference between two entry headings, the entry without the diacritic is first.

Hyphenated words (and words separated by en dashes [–]) are treated as two separate words, the hyphen (or dash) being treated as a space. Quotation marks used in titles of works are generally ignored in alphabetization. If the only difference between two entries is the presence of quotation marks in one, the entry heading without quotation marks is placed first.

Entry headings whose first characters are numerals are alphabetized as though the numbers were spelled out. The numerical components of entries are arranged according to their numerical value, from lowest to highest. For example:

Eight Immortals
1812, War of
Eighteenth Amendment
Eightfold Path

B-12
B-17
B-29
B-52

Abbreviations for "Saint(s)" and its foreign-language equivalents (St., Sta., Ste., SS., etc.) are alphabetized as if they were spelled out.

Saint John
Sainte-Beuve, Charles-Augustin
Sainte Marie aux Mines
SS. Peter and Paul Cathedral
Saintsbury, George Edward

Proper names having the prefix "Mac" or its contracted forms "Mc" and "M' " are all alphabetized as "Mac."

McCarey, Leo
M'Carthy, Charles
MacCarthy, Joseph
M'Carthy, Justin
MacCarthy Island

Honorifics and terms of address, such as "Sir" or "Mrs.." are considered in alphabetization only in titles that are otherwise identical.

Wood, Robert
Wood, Mrs. Robert
Wood, Sir Robert
Wood, Robert Alton

Identical entry headings are arranged in the following order: persons, places, things. For example.

Mercury (Roman deity)
Mercury (planet)
mercury (chem. element)

Geographical Entries. Geographical entities having identical spellings are grouped alphabetically by country *(i.e.,* Albania, Austria. . . . Zimbabwe). Within each country, such entities are listed in the following order: (I) political subdivision (province, district, etc.) in descending order or size; (2) city; (3) physical feature. For example:

Newport (N.S.W., Austr.)
Newport (Que., Can.)
Newport (Mayo, Ire.)
Newport (Tipperary, Ire.)
Newport (Dyfed, U.K.)
Newport (Gwent, U.K.)
Newport (I. of Wight, U.K.)
Newport (Salop, U.K.)
Newport (Ark., U.S.)
Newport (co., R.I., U.S.)
Newport (R.I., U.S.)
Newport Beach (Calif., U.S.)
Newport News (Va., U.S.)

Physical features that cross national boundaries are grouped alphabetically by continent (Africa, Antarctica. Asia, etc.), and such groups precede country groupings.

Niagara Falls (waterfall, N.Am.)
Niagara Falls (Ont., Can.)
Niagara Falls (N.Y., U.S.)

Abbreviations Used in the INDEX

abbrev.	abbreviation
acct.	accounting
A.C.T.	Australian Capital Temtory
	actor. actress
	in the year of our Lord (Latin *anno Domini*)
adj.gen	adjutant general
adm.	admiral
adv.	advertising
Aeg.S.	Aegean Sea
aero.	aeronautics. aeronautical
Af.	Africa. African
Afg.	Afghanistan. Afghani
agri.	agriculture, agriculturist. agricultural
	in the year of the hijrah (hegira), or Muslim era (Latin *anno* Hegrrae)
Ala.	Alabama
Alb.	Albania, Albanian
Alg.	Algeria. Algerian
Alsk.	Alaska. Alaskan
Alta.	Alberta
Am.	American
Am.Sam.	American Samoa
anat.	anatomy
anc.	ancient
And.	Andorra, Andorran
And.Is.	Andaman Islands
Ang.	Angola. Angolese
Ant.	Antigua. Antiguan
Antarc.	Antarctica
anthol.	anthology, anthologist
anthro.	anthropology. anthropologist, anthropological
Arab.	Arabia, Arabic, Arabian
arch.	architecture. architect, architectural
archae.	archaeology, archaeologist archaeological
archbp.	archbishop
archip.	archipelago
Arct.	.Arctic
Arg.	.Argentina. Argentine
arith.	arithmetic
Ariz.	Arizona
Ark.	Arkansas
Arm.	Armenia, Armenian
arrond.	arrondissement
art.	artist
As.	Asia, Asiatic. Asian
Assoc.	Association
A.S.S.R	Autonomous Soviet Socialist Republic
astrol.	astrology, astrologer
astron	astronomy. astronomer, astronomical
astrophys.	astrophysics, astrophysicist. astrophysical
Atl.O.	Atlantic Ocean
au.	author
Aus.	Austria. Austrian
Austr.	Australia. Australian
aut.area	autonomous area
Av., or Ave.	Avenue. Avenida
b.	born
Babyl.	Babylonia. Babylonian
bac.	bacteriology, bacteriologist
Bah.	Bahamas. Bahamian
Bahr.	Bahrain, Bahrainian
Bal.Is.	Balearic Islands
Bangla.	Bangladesh, Bangladeshi
Barb.	Barbados, Barbadian
bart.	baronet
Bav.	Bavaria. Bavarian
BC	before Christ
B.C.	British Columbia
Beds.	Bedfordshire
Belg.	Belgium, Belgian
Ber.	Bermuda, Bermudan
Berks.	Berkshire
bev.	beverage
Bhut.	Bhutan. Bhutanese. Bhutani
bibl.	biblical
biblio	bibliography, bibliographer
biochem.	biochemistry, biochemist
biog.	biography, biographer
biogeog.	biogeography
biol.	biology, biologist, biological
bldg.	building
Blvd.	Boulevard
Bohem.	Bohemia. Bohemian
Bol.	Bolivia. Bolivian
boro.	borough
bot.	botany. botanist. botanical
Bots.	Botswana (country and people)
bp.	bishop
Br.	British, Britain
Braz.	Brazil. Brazilian
brig.gen.	brigadier general
Brun.	Brunei
Bucks.	Buckinghamshire
Bulg.	Bulgaria, Bulgarian
Bur.	Burma. Burmese
Buru.	Burundi. Burundian
bus.	business
Byz.	Byzantium. Byzantine
c.	about. approximately (Latin *circa*)
Calif.	California
C.Am.	Central America
Camb.	Cambodia, Cambodian
Cambs.	Cambridgeshire
Camer.	Cameroon. Cameroons
Can.	Canada. Canadian
Can.Is.	Canary Islands
card.	cardinal
Carib.	Caribbean
caric.	caricature, caricaturist
cartog.	cartography. cartographer
Cath.	Catholicism. Catholic
cath.	cathedral
Cauc.	Caucasia, Caucasus
Cay.Is.	Cayman Islands
CE	Christian Era. Common Era
Celt.	Celtic
Cent.	Central
cent.	century
Cent. Af.Rep.	Central African Republic
chan.	channel
Chan.Is.	Channel Islands
chem.	chemistry. chemist, chemical
Ches.	Cheshire
Chil.	Chilean
Chin.	Chinese
chron.	chronology
class.	classification, classical
cler.	clergyman
Cleve.	Cleveland (English county)
Co.	Company
co.	county
col(s).	column(s)
Col.	Colonel
coll.	college collector, collection
Colo.	Colorado
Colom	Colombia, Colombian
com.	commerce. commercial, commission, committee. commune
Com.	Comoros
comdr.	commander
comdt.	commandant
commo.	commodore
comp.	composer, compiler
Con.B.	Congo, Republic of (Brazzaville) Congolese
Con.K	Congo. Democratic Republic of (Kinshasa) Congolese
Conn.	Connecticut
const.	construction
Corn.	Cornwall
Corp.	Corporation
cpl.	corporal
C.R.	Costa Rica, Costa Rican
crit.	critic, criticism
crystall.	crystallography, crystallographer
C.Verde	Cape Verde
Cyp.	Cyprus, Cypriot
Czech.	Czechoslovakia Czechoslovak(ian)
d.	died
Dan.	Danish
D.C.	District of Columbia
Del.	Delaware
Dem.	Democratic
Den.	Denmark
dept.	department, *département*
Derby.	Derbyshire
dermatol.	dermatology, dermatologist
D.F.	Federal District (Spanish *Distrito Federal*)
dial.	dialect
dict.	dictionary
dipl.	diplomat
dir.	director
dist.	district
div.	division
dom.	dominion
Dom.	Dominica
Dom.Rep.	Dominican Republic
Dr.	Doctor; Drive
dram.	dramatist
Drav.	Dravidian
Du.	Dutch
E.	East, Eastern
E.Af.	East Africa
Ec.	Ecuador, Ecuadorian
eccl.	ecclesiastical. ecclesiast
econ.	economics. economist
ed.	edition. editor
educ.	education, educator
e.g.	for example (Latin *exempli gratia*)
E.Ger.	East Germany
Egy.	Egypt, Egyptian
elec.	electricity, electric, electrical
El Sal.	El Salvador
embryol.	embryology
emp.	empire, emperor, empress
encyc.	encyclopaedia
Eng.	England, English
engr.	engraving. engraver
engin.	engineering. engineer
entom.	entomology
Equat. Guin.	Equatorial Guinea
est.	estimate. estimated; estuary
Est.	Estonia, Estonian
E Susx	East Sussex
et al.	and others (Latin et *alii,* or *aliae*)
et seq.	and following page(s) (Latin *et sequens,* sequentes, or *sequentia*)
etc.	and so forth (Latin *et* cetera)
Eth.	Ethiopia, Ethiopian
ethnol.	ethnology, ethnologist
Eur.	Europe, European
exec.	executive
expl.	explorer
f.	father
Faer.Is.	Faeroe Islands
Falk.Is.	Falkland Islands, Falklander
fam.	family
Fed.	Federation. Federal
fig.	figure
Fili.	Filipino (native of the Philippines)
Fin.	Finland. Finnish
fin.	finance
fl.	flounshed (Latin *floruit*)
Fla.	Florida
Flem.	Flemish
fol.	following
Found.	Foundation
Fr.	France. French
Ft.	Fort
Ga.	Georgia
Gab.	Gabon. Gabonese
Gam.	Gambia, Gambian
gen.	general
geneal.	genealogy, genealogist, genealogical
genet	genetics, geneticist
geog.	geography. geographer, geographical
geol.	geology. geologist. geological
geom.	geometry
geophys.	geophysics. geophysical, geophysicist
Ger.	Germany. German
Gib.	Gibraltar
Glos.	Gloucestershire
gov.	governor
govt.	government
Gr.	Greece, Greek
gram.	grammar grammanan
Green.	Greenland
Gren.	Grenada
Gt.Br.	Great Britain
Gtr London	Greater London
Gtr Mches.	Greater Manchester
Guad.	Guadeloupe
Guat.	Guatemala, Guatemalan
Guin.	Guinea, Guinean
Guq.	Guqana
h.	husband
Hants.	Hampshire
Haw.	Hawaii, Hawaiian
Heb.	Hebrew
her.	heraldry
Here. &Worc.	Hereford and Worcester
Hens.	Hertfordshire
hist.	history, historian. historical
H.K.	Hong Kong
HMS	His, or Her. Majesty's Ship. or Service
Holl.	Holland
Hon.	Honourable
Hond.	Honduras. Honduran
hort.	horticulture. horticulturist
hts.	heights
Humbs.	Humberside
Hung.	Hungary. Hungarian
Hwy.	Highway
Ia.	Iowa
ibid.	in the same place (Latin *ibidem*)
Ice.	Iceland. Icelandic
Ida.	Idaho
I.E.	Indo-European
i.e.	that is (Latin id est)
Ill.	Illinois
illus.	illustration
Inc.	Incorporated
incl.	including
Ind.	Indiana; independent
Ind.O.	Indian Ocean
Indon.	Indonesia, Indonesian
indus.	industry. industrialist, industrial
Inst.	Institute, Institution
instru.	instrument
internat.	international
inv.	inventor
I.of Man	Isle of Man
I.of Wight. or I.O.W.	Isle of Wight
Ire.	Ireland
is., isl(s).	Island. Islands
Isr.	Israel, Israeli
isth.	isthmus
It.	Italy, Italian
Iv.Cst.	Ivory Coast
Jam.	Jamaica, Jamaican
Jor.	Jordan. Jordanian
journ.	journalism. journalist,
Jr.	Junior
jur.	jurist
k.	king
Kamp	Kampuchea. Kampuchean
Kan.	Kansas
Ken.	Kenya. Kenyan
king.	kingdom
Kiri.	Kiribati
Kor.	Korea, Korean
Kuw.	Kuwait, Kuwaiti
Ky.	Kentucky
l.	lake; lane
La.	Louisiana
Lab.	Labrador. Labradorian
Lancs.	Lancashire
lang.	language
Lat.	Latin

law.	lawyer
lb	pound(s)
Leb.	Lebanon, Lebanese
Lee.Is.	Leeward Islands
leg.	legend. legendary legislation
Leic.	Leicestershire
Les.	Lesotho
Lib.	Liberia, Liberian
libn.	librarian
Liech.	Liechtenstein
lieut.	lieutenant
Lincs.	Lincolnshire
ling.	linguistics. linguist
lit.	literature. literary
Lith	Lithuania. Lithuanian
litho.	lithography, lithographer
Ltd.	Limited
Luxem.	Luxembourg, Luxembourgian
m.	married
Maced.	Macedonia. Macedonian
Mad.	Madagascar, Madagascan
mag.	magazine
maj.	major
Mal.	Malaysia. Malaysian
Malag. Rep.	Malagasy Republic
Mald.	Maldives. Maldivan
Man.	Manitoba
manag.	manager
Mart.	Martinique, Martinican
Mass.	Massachusetts
math.	mathematics, mathematician. mathematical
Maur.	Mauritius; Mauritania
Md.	Maryland
Me.	Maine
meas.	measure, measurement
mech.	mechanics
med.	medicine, medical
Medit.	Mediterranean
mer.	merchant
Mers.	Merseyside
Mesop	Mesopotamia, Mesopotamian
met	metallurgy, metallurgist. metallurgical
meteorol.	meteorology. meteorologist
Mex	Mexico. Mexican
mfr.	manufacture. manufacturer
mi	mile(s)
Mich.	Michigan
microbiol.	microbiology. microbiologist
mil.	military
min.	mineral. mining, *mineralogist*, mineralogical
minis.	minister
Minn.	Minnesota
Miss.	Mississippi
Mo.	Missouri
mod.	modern
Mon.	Monaco. Monacan. Monagasque
mon.	monument
Mong.	Mongolia. Mongolian
Mont.	Montana
Monts.	Montserrat
Mor.	Morocco, Moroccan
Moz.	Mozambique, Mozambican
ms(s).	manuscript(s)
Mt., Mt(s).	Mount, Mountain(s)
mun.	municipality
mus.	music, musician. musical
myth.	mythology, mythological
N.	North. Northern
N.Af.	North Africa
N.Am	North America
nat.	naturalist
natl.	national
naut.	nautical
nav.	naval
navig.	navigator
N.R.	New Brunswick
N.C.	North Carolina
N.Cal.	New Caledonia
N.Dak., or N.D.	North Dakota
	Nebraska
Neth.	The Netherlands
Neth.Ant.	Netherlands Antilles
Nev.	Nevada
news.	newspaper
Nfd.	Newfoundland
N.G.	New Guinea
N.H.	New Hampshire
Nic.	Nicaragua. Nicaraguan
nick.	nickname
Nig.	Nigeria, Nigerian
N.Ire.	Northern Ireland
N.J.	New Jersey
N.Kor.	North Korea
N.Mex., or N.M.	New Mexico
Nor.	Norway, Norwegian
Norf.	Norfolk
Northants.	Northamptonshire
Northum.	Northumberland
Notts.	Nottinghamshire
N.S.	Nova Scotia
N.S.W.	New South Wales
N.Terr.	Northern Territory (Australia)
N.W. Terr	Northwest Temtories (Canada)
N.Y.	New York
N.Y.C.	New York City
N Yorks.	North Yorkshire
N.Z.	New Zealand
obl.	*oblast*
of.	officer
offi.	official
Okla.	Oklahoma
okr.	okrug
Ont.	Ontario
op *cit*	in the work cited (Latin *opere*, or opus *citato*)
Ore.	Oregon
org(s).	organization(s)
osteol.	osteology
osteop.	osteopathology, osteopath
Oxon.	Oxfordshire
p.	page
Pa.	Pennsylvania
Pac.O.	Pacific Ocean
paint.	painting. painter
Pak.	Pakistan. Pakistani
Pal.	Palestine. Palestinian
paleob.	paleobotany, paleobotanist
paleog.	paleogeographq
paleon.	paleontology, paleontologist
Pan.	Panama, Panamanian
Pap.N.G.	Papua New Guinea. Papuan
Par.	Paraguay, Paraguayan
parl.	parliament
passim to	references scattered between pages cited
path.	pathology. pathologist
P.E.I.	Prince Edward Island
penin.	peninsula
period.	periodical
Pers.	Persia, Persian
petrol.	petrology, petrologist
pharm.	pharmacy. pharmacist, pharmacology, pharmacologist
Phil.	Philippines
philan.	philanthropy, philanthropist
philol.	philology, philologist
philos.	philosophy. philosopher
phot.	photography, photographer
phys.	physics. physicist
physic.	physician
physiol	physiology. physiologist, physiological
plat	plateau
Pol.	Poland, Polish
pol.	politics. politician, political
pol.sci.	political science
Poly.	Polynesia, Polynesian
POP.	population
Port.	Portugal. Portuguese
poss.	possession
P.R.	Puerto Rico, Pueno Rican
pr.	priest
preft.	prefecture
prelim.	preliminary (census)
pres.	president
print	printing, printer
pr.min	prime minister
prof.	professor
Prot.	Protectorate; Protestant
prov.	province, provincial
pseud.	pseudonym. pseudonymous
psychol.	psychology. psychologist, psychological
pt.	point
pta.	punta
pte.	pointe
ptg.	printing
pub.	public; publication
publ	publisher
pvt.	private
q.	queen
qq.v.	which see (plural; Latin quae *vide*)
Que.	Quebec. Quebecer. Quebecker
Queens.. or Qld.	Queensland
q.v.	which see (singular; Latin *quod vide*)
Rd.	road
rear adm.	rear admiral
ref.	reference
reg.	region
rel.	religion, religious
rep.	representative; republic
res.	reservoir
reserva.	reservation
resid.	residency
rev.	revised. revision: revue; revolution. revolutionary
R.I	Rhode Island
nv.	river
Rom.	Romania. Romanian
R.R.	railroad
Russ.	Russia. Russian
Rw.	Rwanda. Rwand
ry.	railway
S.	South, Southern
S.	Saint (*San, Santo, Sant'*)
S.Af.	South Africa. South African
Sam.	Samoa, Samoan
S.Am.	South .America. South American
San Mar.	San Marino
Sask.	Saskatchewan
Saud. Arab.	Saudi Arabia, Saudi. Saudi Arabian
S.Austr.	South Australia
S.C.	South Carolina
Scand.	Scandinavia. Scandinavian
schol	scholar
sci.	science. scientist. scientific
Scot.	Scotland, Scottish
sculp.	sculpture, sculptor
S.Dak.. or S.D	South Dakota
sen.	senator
Sen.	Senegal, Senegalese
Sey.	Seychelles
S.F.S.R.	Soviet Federated Socialist Republic
S.Glam	South Glamorgan
sgt.	sergeant
Shrops.	Shropshire
Sib.	Siberia. Siberian
Sing.	Singapore, Singaporan
S.Kor	South Korea
S.L.	Sierra Leone
soc.	society, social; socialist
sociol.	sociology, sociologist, sociological
Sol.Is.	Solomon Islands
Som.	Somali. Somalia (Somali Republic), Somalian
Somer.	Somerset
Sov.	Soviet
Sp.	Spain. Spanish
spr(s).	spring(s)
Sr.	Senior
SS	Steamship
SS.	Saints
S.S.R.	Soviet Socialist Republic
St.	Saint (*Sankt, Sint*); street
Sta.	Saint (*Santa*)
Staffs.	Staffordshire
states.	Statesman
statis.	statistician, statistics
Ste.	Saint (*Sainte*)
St.Kitts	Saint Kitts-Nevis-Anguilla
St.P.&M.	Saint Pierre and Miquelon
str.	strait
Sud.	Sudan. Sudanese
Suff.	Suffolk
Sum.	Sumatra
Sur.	Suriname
surg.	surgery. surgeon
S.W.A.	South West Africa/ Namibia
Swaz.	Swaziland
Swed.	Sweden, Swedish
Switz.	Switzerland
S Yorks.	South Yorkshire
Syr.	Syria, Syrian
Tai.	Taiwan, Taiwanese
Tan.. or Tanz.	Tanzania, Tanzanian
Tas.	Tasmania. Tasmanian
tech.	technology, technological
Tenn.	Tennessee
terr.	temtory, territorial
Tex.	Texas
Thai.	Thailand, Thai
thea.	theatre, theatrical
theol.	theology, theologian. theological
Tib.	Tibet, Tibetan
trag.	tragedy. tragedian
Tr. and Tob.	Trinidad and Tobago
trans.	translated, translation, translator(s)
trib.	tributary
trig.	tngonometry
Tr.Terr Pac.Is.	Trust Temtory of the Pacific Islands
Tun.	Tunisia. Tunisian
Tur.	Turkey. Turkish
Tuv.	Tuvalu, Tuvaluan
twp.	township
typog.	typography
U.A.E.	United Arab Emirates
Ugan.	Uganda. Ugandan
U.K.	United Kingdom
UN	United Nations
Univ.	University
Urug.	Uruguay, Uruguayan
U.S.	United States
U.S.A	United States of America
uss	United States Ship
U.S.S.R.	Union of Soviet Socialist Republics
Va.	Virginia
val.	valley
van.	Vanuatu
Venez	Venezuela. Venezuelan
vet.	veterinary
Vic.	Victoria
vice adm.	vice admiral
vice pres.	vice president
Viet.	Vietnam, Vietnamese
vil.	vilayet
Vir.Is.	Virgin Islands
viz.	namely (Latin videlicet)
vol.	volume(s)
Vt.	Vermont
W.	West, Western
w.	wife
W.Af.	West Africa. West African
Warw.	Warwickshire
Wash.	Washington
W.Austr.	Western Australia
W.Ger.	West Germany
W.I.	West Indies
Wilts.	Wiltshire
Wis.	Wisconsin
W Mids	West Midlands
writ.	writer
W.Sam.	Western Samoa, Western Samoan
W Susx	West Sussex
W.Va.	West Virginia
W.W.	world war
Wyo.	Wyoming
W Yorks.	West Yorkshire
Yem.	Yemen, Yemeni
Yugos.	Yugoslavia, Yugoslavian
Zimb.	Zimbabwe. Zimbabwean
zool.	zoology, zoologist, zoological
	Zoroastrianism

L

l-(l- or (-)) (isomeric form in chem.): *see under* general chcniical compound by name, *e.g.*, for L-thyroxine acid *see* thyroxine; cxccpt as below
"L'Alphabet des mouvements du corps **humain"** (work by Stepanov) use in choreography **3**:267:2a
L–D process: *see* basic oxygen process
l.-dopa (biochem.)
endocrine system function **18**:426:1h
Parkinson's disease treatment **9**:160:2a; **17**:504:1b
l. **fibre** (biol.): *see* salt receptor
l.-function (math.)
major ref. in Number Theory **25**:25:1a
l.-head engine (mech.)
cylinder block designs **18**:481:2a
l.. Straus and Sons (Am. Co.)
establishment by Stl-aus family **11**:307:3b
L-tetraiodothyronine (biocheni.): *see* thyroxine
l. **** (Hr. org.): *see* Library Association
l.a (chem element): *see* lanthanum
la (in proper names): *see* below and *see also* names spelled with no space after "la" (*e.g.*, LaFontaine, Sir Louis Hippolyte)
La-ang-ts'o. *or* Langak Tso (l., China)
geography of Tibet **16**:207:1a
La Baie (Que., Can.) **7**:61:1a
La **Barre, Jean-François Lefebvre, chevalier** de (Fr. nobleman)
Voltaire's reaction to his execution **19**:574:1a; **29**:542:1a
"Là-bas" (work by Huysmans): *see* "Down There"

'De," "la," "van," and similar components of a name, when followed by a space, are alphabetized as separate words (e.g., De Forest, Lee). When they are joined to the following part of a name, the combination is treated as a single word (e.g., DeForest, John William)

La Baule-Escouhlac (resort, Fr.): *see* Baule-Escoublac, La
La Baume **le** Blanc, Louise-Francoise de (Fr. mistress): *see* La Vallière, Louise-Françoise de La Baume le Blanc, duchesse de
La Bechnith, Byron de (Am. assassin)
murder of Evers **4**:621:3a
La **Boétie, Étienne** de (Fr. au.)
association with Montaigne **24**:353:1b
La Bourdonnais. **Bertrand-François Mahé,** comte de (Fr. of.) **7**:61:1a
history of
India **21**:79:2a
Reunion **21**:179:1b
La Brea **Tar** Pits (tar pits, Calif., U.S.) **7**:61:1b
location in Lns Angeles **23**:310:1a. *map* 308
remains of dire wolves 4:118:1b
La **Bruyère,** Jean de (Fr. au.) **7**:61:1b
contribution to French literature **19**:573:1b
views on letter writing **23**:195:1a
La **Calprenède,** Gaultier de Coste, seigneur de (Fr. au.) **7**:61:2b
La Ceiha (Hond.): *see* Ceiba. La
La Chalotais, **Louis-René** de Caradeuc de (Fr. magistrate) **7**:61:3a
La **Chapelle** (La., U.S.): rce Abbeville
La Chapelle-aua-Saints fossil (paleon.)
compared with Asian fossils **14**:225:1a
La **Chaussée,** Pierre-Claude **Nivelle** de (Fr. playwright) **7**:61:3b
contribution to French literature **19**:574:2b
La Chaua-de-Fonds (Switz.): *see* Chaux-de-Fonds. La
La **Chétardie,** Jacques-Joachim **Trotti,** marquis de (Fr. dipl.) **7**:61:3b
la chin (mus. instru.): *see* ch'in
la ch'in (nius. instru.): *see* yüeh-ch'in
La Condamine, Charles-Rlarie de (Fr. nat. and math.) **7**:62:1a
exploration of Amazon Rain Forest **27**:710:1b
La Crosse (Wis., U.S.) **7**:62:1b
location *map* **29**:158
La **Crosse** Railroad (Am. ry.)
contribution by Sage **10**:299:3b
La Curne de **Sainte-Pelaye,** Jean **Baptiste** de (Fr. lexicographer) **7**:62:2a
La **Estrelleta** (prov.. Dom.Rep.): *see* Elías Piña
La Farge. John (Am. paint.) **7**:62:2a
role in stained glass revival **17**:199:1a
La Farge, Oliver Hazard Perry (Am. au. and anthro.) 7:62:3a
La Farina. Giuseppe (It. rev.. writ., and hist.) 7:62:3b
La Fagette, **Gilbert Motier** de (marshal of Fr.) **7**:63:1a
La Fayette, Marie-Joseph-Paul-Yves-Roch-Gilbert **du Motier,** marquis de (Fr. noble): *see* Lafayette. Marie-Joseph-Paul-Yves-Roch-Gilbert du Motier, marquis dc
La **Fayette, Marie-Madeleine** Pioche de la **Vergne,** comtesse de, or Madame de La Fayette (Fr. au.) **7**:63:1b
contribution to French literature **19**:572:2b
La **Flesche,** Francis (Am. ethnol.) **7**:63:2a
association with Fletcher **4**:830:1b
La Flesche, Susette, or Bright Eyes (Am. au. and activist) **7**:63:2b
La **Follette,** Robert **Marion** (U.S. sen.) **7**:63:3a
history of
Progressive Pan) **9**:722:2b
Wisconsin **29**:401:2a
La Follette Seaman's **Act** (U.S. hist.)
proposed by La Follett 7:64:1b
"La Follette's Weekly" (Am. pub.): *see* "Progressivc. Thc"
La Fontaine, or Mlle de Lafontaine (Fr. ballerina) **7**:64:2b
La Fontaine, Jean de (Fr. poet) **7**:64:3a
major ref. in Art of Literature 23:112:2b
association uith Racinc **9**:879:2b
contribution to French literature **19**:572:2b
influence of Aesop 1:123:1b
"La Fontaine et ses fables" (work by Taine)
discussed in biography **11**:507:2a
La Forge, Louis de (Fr. physic.)
contribution to Cartesian philosophy **15**:593:2b
La Fosse. Charles de, *or* Charles Delafosse (Fr. art.) **7**:65:3b
La France (aircraft)
design by Charles Renard **9**:1023:2b
La Fresnaye, Roger de (Fr. paint.) **7**:66:1a
La Frontera (geog. reg., Chile) *major ref. in* Chile **16**:21:1b
La **Galaisière,** Legentil de (Fr. astron.)
discovery of Trifid Nebula **11**:923:3b
La **Galissonière, Roland-Michel Barrin,** marquis de, *or* Roland-Michel Barin. marquis de La Galissonière (comdt.-gen. of New Fr.) **7**:66:1h
history of Canada **15**:502:2a
La Giocosa (It. hist. school)
major ref in History of Education **18**:39:1b
role of Vittorino da Feltre **12**:407:1b
La Goulette (Tun.): *see* Halq al-Wadi
La **Grande,** or Brownsville (Ore.. U.S.) **7**:66:2a
location *map* **29**:158
La **Grandière,** Pierre-Paul-Marie-**Benoit** de (Fr. adm.)
effect on Vietnamese history **27**:860:1a
La Grange (Ga.. U.S.) **7**:66:2a
location *map* **29**:158
La Guardia, **Fiorello** Henry (mayor of New York City) **7**:66:2b
political methods **24**:873:2a
La Guma, **Alex** (S.Af. au.) **7**:66:3a
contribution to South African literature **11**:34:3b; **13**:139:2b
La Habana (prov., Cuba) **7**:66:3b
Cuba **29**:745:2a
La Habana (Cuba): *see* Havana
La I-Xahana **vieja** (dist., Havana. Cuba): *see* Havana
La **Halle,** d a m de (Fr. poet): *see* Adam de la Halle
La Harpe, **Frédéric-César** de (Swiss pol.) **7**:67:1a
influence on Alexander I **1**:242:2b
role in Vaud liberation movement **28**:367:1b
La Harpe, Jean-Frangois de (Fr. crit.) **7**:67:1b
La Hire, Laurent de, or Laurent de La Hyre (Fr. paint.) **7**:67:1b
La Hontan, Louis-Armand de Lom **d'Arce,** baron de, or Louis-Armand de Lom d'Arce baron de Lahontan. or Louis-Armand de Lom d'Arce (Fr. soldier) 7:67:2a
La **Jaunaye,** Convention of (Fr. hist.)
effect on Vendée Wars **12**:300:2b
La **Jolla** Submarine Canyon (Pac.O.)
fan valleys **25**:154:2b
Scripps Canyon **10**:571:2b
submarine slump **11**:344:2a
La Junta (Colo.. U.S.) **7**:67:2b
location *map* **29**:158
la Kara, or Kara (reg.. Togo) **7**:67:2b
La **Lajuela** (C.R.): *see* Alajuela
La Libertad (dept.. El Sal.) **7**:67:3b
La **Libertad** (El Sal.) **7**:67:3b
La Libertad, or Libertad (dept.. Peru) **7**:67:3a
La **Línea,** or La Línea de la Concepción (Sp.) **7**:67:3b
La **Louvière** (Belg.) **7**:68:1a
role in
Belgium **23**:344:1a
Centre **3**:31:1b
La Rla'dukelleng (Buginese aristocrat): *see* Arung Singkang
La Rlama Experimental Theatre Company
U.S. theatre **29**:201:2a
La **Mancha** (plat.. Sp.) **7**:68:1a
Castile-La hlancha **2**:934:2b
plateau charactenstics **28**:68:2a
La **Marche, Olivier** de (Burgundian au.) **7**:68:1b
rhétoriqueur legacy **10**:21:1a
La Xlarmora. **Alfonso** Ferrero (It. gcn. and states.) **7**:68:2a
role in Italian history **22**:231:2a
La **Matanza** (partido. Arg.) **7**:68:2b
La **Mesnardière,** Hippolgte-Jules **Pilet** de (Fr. au.)
contribution to French literature **19**:571:1b
La Xlettrie. Julien **Offroy** de (Fr. physic. and philos.) **7**:68:3a
Dcscartes's influence **25**:632:1b
philosophical views **25**:761:2b
Epicureanism **25**:584:1b
Materialism **18**:757:2b
"La Mort: Mon ironie **dépasse toutes les autres"** (print by Redon)
effect of lithography *illus.* 26:117
La **Mothe** Le **Vayer,** Frangois de, or Orosius Tubero (Fr. philos.) **7**:68:3b
contribution to French literature **19**:573:1b
La **Motte,** Comtesse de (Fr. adventuress)
role in Affair of the Diamond Necklace **4**:65:2a
la **Motte,** Jean-Baptiste de (Fr. arch.)
design of Gostinq Dvor **22**:955:2a
La Noue, **François** de (Fr. Huguenot leader) **7**:69:1b
La **Orotava** (Sp.) **7**:69:1b
La Oroya, or Oroya (Peru) **7**:69:2a
La **Palma,** or San Miguel de la Palma (is.. Canary Islands. Sp.) **7**:69:2a
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La **Palma** (Pan.)
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La Pampa (prov., Arg.) **7**:69:2a
La Paz (dept.. Bol.) **7**:69:2b
La Paz (Bol.) **7**:69:3a
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La Paz (dept.. El.Sal.) **7**:70:1a
La Paz (dept.. Hond.) **7**:70:1a
La Paz (Hond.) **7**:70:1a
La Paz (Mex.) **7**:70:1b
physiography of Baja California **1**:810:1a
La Paz (Urug.)
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La Paz. Cordillera de (mt. range. S.Am.)
physiography of the Cordillera Real **9**:972:3a
La **Pérouse,** Jean-Frangois de **Galaup,** comte de (Fr. navig.) **7**:70:1b
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La Perouse Strait, or Proliv Laperuza, or Soya Strait. or Sōya-Kaikyō (str., U.S.S.R.) **7**:70:2b
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La **Piedad** Cavadas (Mex.) **7**:70:2b
La Planche, **François** de, or Franz van den Planken (Flem. weaver)
development of tapestry loom **17**:89:2b
La Plata (Arg.) **7**:70:3a
La Plata (Bol.): see Sucre
La **Plata,** University of (univ., La Plata, Bol.)
importance to Boliva **22**:837:2a
La **Plata,** Viceroyalty of (Bol. hist.)
administration by **Spain 28**:50:2b
La Plata Basin (reg., Braz.)
physiography of Brazil **2**:487:3b
La Plata River, or Rio de la Plata (riv., P.R.) **7**:70:3b
La **Porrée,** Gilbert de (Fr. bp.)
conflict with Bernard of Clairvaux **2**:145:3a; **25**:752:1b
La Porte (Ind., U.S.) **7**:70:3b
La Renaudie (Fr. nobleman)
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La **Révellière-Lépeaux, Louis-Marie** de (Fr. pol.) **7**:71:1a
La Rioja (prov.. Arg.) **7**:71:1b
La Rioja (Arg.) **7**:71:2a
La Rioja (reg.. Sp.) **7**:71:2a
Spanish language development **22**:644:2b
La Rive, Auguste-Arthur de (Fr. phys.) **7**:71:3b
La **Roche,** Sophie **von,** or Sophie Gutermann (Ger. writ.) **7**:72:1a
La **Roche-sur-Yon** (Fr.): see Roche-sur-Yon. La
La Rochefoucauld. Frangois VI. **duc** de or Prince de Marcillac (Fr. writ.) **7**:72:2a
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La Rochefoucauld family (Fr. noble fam.) **7**:72:1b
La **Rochefoucauld-Liancourt, François-Alexandre Frédéric, duc** de (Fr. educ.) **7**:73:2a
La Rochejaquelein, Henri **Vergier,** comte de (Fr. noble)
role in Vendee Wars **12**:300:2a
La Rochelle (Fr.): *see* Rochelle. La

La Rochelle, Pierre Drieu (Fr. pol. figure): *see* Drieu La Rochelle, Pierre
La Rocque, Jean-François de, sieur de Roberval (Fr. expl.): *see* Roberval, Jean-François de La Rocque, sieur de
La Romana (prov., Dom.Rep.) **7**:73:3a
La Romana (Dom.Rep.) **7**:73:3a
La Rue, Bubbles (marionette character)
creation of Bil and Cora Baird **1**:809:1a
La Rue, Pierre de, *or* Peter van Straten, *or* Pierchon, *or* Perchon, *or* Pierson de La Rue (Flem. comp.) **7**:73:3a
La-sa (Tibet, China): *see* Lhasa
La Sáenz (Lat. Am. rev.): *see* Sáenz, Manuela
La Sale, Antoine de, *or* Antoine de La Salle (Fr. writ.) **7**:73:3b
contribution to French literature **19**:567:1b
La Salle (Ill., U.S.) **7**:74:1b
La Salle (Que., Can.) **7**:74:1a
La Salle, René-Robert Cavelier, sieur de (Fr. expl.) **7**:74:2a
association with
Frontenac **5**:22:1a
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Mississippi River **24**:1015:1a
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La Salle, Saint Jean-Baptiste de (Fr. educ.) **7**:74:1b
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"La Salle and the Discovery of the Great West" (work by Parkman)
discussed in biography **9**:160:3b
La Scala, *or* Teatro alla Scala (opera house, Milan, It.) **7**:75:1a
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La Serena (Chile) **7**:75:1b
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La Sila (mts., It.)
physiography of the Apennines **18**:820:2b
La Silla Observatory (observatory, Chile)
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La Spezia, *or* Spezia (nav. base, It.) **7**:75:2a
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La Taille, Jean de (Fr. au.) **7**:75:2a
La Tène (archae. site and Iron Age culture, Switz.) **7**:75:2b
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La Tour, Charles Cagniard de (Fr. engin.): *see* Cagniard de La Tour, Charles
La Tour, Charles Turgis de Saint-Etienne de (gov. of Acadia) **7**:75:3b
La Tour, Georges de (Fr. art.) **7**:76:1a
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La Tour, Maurice-Quentin de, *or* Maurice Quentin de Latour (Fr. art.) **7**:76:2a
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Charles Edward, the Young Pretender *illus.* **3**:124
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La Tour du Pin, House of (Fr. hist.)
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La Trappe, Abbey of (abbey, Fr.)
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La Trémoille, Georges de (Fr. noble) **7**:76:2b
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La Trobe River, *or* Glengarry (riv., Vic., Austr.) **7**:76:3a
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La Union (prov., Phil.) **7**:77:1a
La Vallière, Louise-Françoise de La Baume le Blanc, duchesse de (Fr. mistress) **7**:77:1a
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La Varenne, François-Pierre de (Fr. chef)
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French culinary art **19**:692:1a
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La Vauguyon, Antoine de Quélen de Caussade, duc de (Fr. educ.)
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La Vega (prov., Dom. Rep.) **7**:77:2a
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La Venta (archae. site, Mex.)
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La Vérendrye, Pierre Gaultier de Varennes, sieur de (Fr.-Can. soldier and expl.) **7**:77:2b
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Law Courts (courthouse. London, U.K.): *see* Royal Courts of Justice
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"Law of Freedom in **a Platform, The"** (work by Winstanley)
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"Law of Nature" (work by Locke)
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Lawrence. Gertrude, or Gertrud Alexandra Dagma Lawrence Klasen (Br. act.) **7:**205:1b
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Aberdeen *illus.* **1:**28
Bentinck *illus.* 2:111
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Lawson cypress, *or* Port Orford cedar. *or* ginger pine. *or* Chamaecyparis lawsoniana (bot.)
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Lcang-skya quturtu Rol-pa'i rdo-rje (Mong. schol.)
contribution to Buddhist literature **15**:294:1b; *illus.* **15**:751
LCD (electronics): *see* liquid crystal display
LCM (math.): *see* least common multiple
LCP (pol. party. Austr.): *see* Liberal–National Country Party
LCUSA (council of churches): *see* Lutheran Council in the United States of America
LD50 (pharm.): *see* median lethal dose
LDC (sociol.): *see* developing nations
LDL (physiol.): *see* low-densit) lipoprotein
LDP (pol. part). Japan): *see* Liberal-Democratic Party
le (in proper names): *see* below and *see also* names speiled with no space after "le" (*e.g.,* LeMay, Curtis Emerson)
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see also disease: folk medicine: medical association; medical education; medical ethics; medical jurisprudence: medrcal legislation. medical research; medical technology; branches of medicine and medical specialties, *e.g.,* anesthesiology: forensic medicine; industrial medicine; preventative medicine; psychiatry: public health; aspects of medical practice, *e.g.,* diagnostics: therapeutics: medical procedures, *e.g.,* acupuncture: amputation; autopsy; brain scanning; surgery; associated arts and sciences. *e.g.,* chiropractic: dentistry: midwifery; nursing; paramedical personnel: pharmacy: medical institutions. *e.g.,* health maintenance organization: hospital; particular countries: and particular diseases and disorders, medications, and physicians by name
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for a list of related subjects see PROPAEDIA: Section 821
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Médicis, Catherine de (q. of Fr.): *see* Catherine de Médicis
Médicis, Marie de (q. of Fr.): *see* Marie de Médicis
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"Medieval Rhodesia" (work by Randall-Maclver)
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for a list of related subjects see PROPAEDIA: Section 812
see also forms of meditation, *e.g.*, Buddhist meditation; Transcendental Meditation
"Meditation," *or* "Betrachtung" (work by Kafka)
discussed in biography **6:**678:2b
"Meditation of the Sad Soul," *or* "Hegyon ha-Nefesh ha-Azuva" (work by Abraham bar Hiyya)
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Opera dei congressi (It. pol.)
promotion of social programs **22:**233:2a
Opera del Duomo (museum, Florence, It.)
religious institutions of Florence **19:**300:1b
opera glass (optical instru.)
type of binocular 2:219:3a
Opera House (bldg., Dresden, E.Ger.)
design by Semper *illus.* **10:**628
Opera House (bldg., Paris, Fr.)
design by Gamier **5:**128:2b, *illus.*
"Opera **nella** quale **si** insegna a **scrivere**" (work by Amphiareo)
model for calligraphy **29:**1026:2b
"Opera Philosophica et Mineralia" (work by Swedenborg)
discussed in biography **11:**438:1a
"Opera **Selecta**" (work by Hardouin)
discussed in biography **5:**700:2a
opera **seria** (Ital. mus.) **8:**964:3a
major ref in History of Western Music **24:**556:2a
influence on Bach **14:**540:2a
reforms of Rossini 10:195:2a
for a list of related subjects see PROPAEDIA: Section 624
operant conditioning, *or* action conditioning, *or* instrumental conditioning (psychol.)
major refs. in Animal Learning **22:**874:1a; Human Learning and Cognition **22:**887:1a
behaviour development **14:**714:2b
conditioning theory **3:**522:2a
education theory **28:**449:2a
opéras-minutes (work by Milhaud)
jazz style in opera elements **24:**635:2a
"Óperas Portuguesas" (work by Silva) modinha **8:**218:1a
revival of Portuguese drama **25:**1067:2b
operating system (computer sci.)
computer programs **3:**508:3a
description **16:**634:1b; **16:**645:2b
development in computer science **16:**631:2a
operation (math.)
algebraic notations **13:**305:1b
mathematic analysis **13:**518:2b
see also arithmetic operation
Operation.. . (mil. plans): *see under* substantive word, *e.g.,* Torch, Operation
operational amplifier (elec.)
analog computers **1:**367:1a; **16:**639:1a
measurement computation **23:**730:1b
operational circuit (computer sci.)
arithmetic/logic unit component **16:**644:2a
operational experiment (indus. engin.)
use in operational research **21:**211:2b
operational fatigue (psychol.): *see* combat fatigue
operational gaming (indus. engin.)
technique in computer simulation **21:**213:1a
operational research (math.): *see* operations research
"Operational Research Quarterly" (Br. mag.): *see* "Journal of the Operational Research Society"
Operational Research Society, *or* Operational Research Club (Br. org.)
development of operations research **21:**210:1a
operationalism (philos.)
views of Mach **25:**675:1b
operationism, *or* psychological operationism (psychol.)
history of psychology **26:**328:2b
operations management (indus. engin.): *see* production management
operations research, *or* operational research (math.) **8:**964:3b
major ref in Industrial Engineering and Production **21:**209:1a
development by Taylor **11:**588:3b
industrial engineering **18:**564:1a
use of statistics **28:**230:1a
"Operations Research," *or* "Journal of the Operations Research Society of America" (Am. mag.)
contribution to operations research **21:**210:1b
"Operationskreis des Logikkalkuls" (work by Schroder)
theory logic history **23:**246:1a
operative error (statis.)
chemical analysis **13:**551:1a
operative sepsis, *or* hospital disease (disease)
research by Lister **7:**394:2b
operator (math.) **8:**965:1b
formal logic **23:**252:1a
see also dyadic operator; monadic operator
operator (phys.)
conservation laws and symmetry **25:**820:1a
operator gene (genet.)
operon system **8:**965:2a
operator loss (meas.)
effect on radar efficiency **23:**764:1b
operator ring (math): *see* von Neumann algebra
operculum (inv.)
characteristic of
mollusks **24:**307:2a
scorpions **13:**917:1a
operculum (plant structure)
structure and function in mosses **15:**255:2a, *illus.* 254
"Opere Matematiche" (work by Beltrami)
discussed in biography **2:**84:3b
operetta (mus.) **8:**965:1b
major ref in Musical Forms and Genres **24:**621:2a
creation by Offenbach **8:**882:1b
occurrence in French theatre **19:**581:2a
source of popular music **25:**1025:1a
for a list ofrelated subjects see PROPAEDIA: Section 624
see also musical comedy; and individual composers, *e.g.* Hiller, Johann Adam
"Operette **morali**" (work by Leopardi)
discussed in biography **7:**282:3a
Italian literature **22:**158:2b
"operina da imparare di scrivere **littera** cancellaresca" (manual by Arrighi)
development of calligraphy **29:**1025:2b
operon (genet.) **8:**965:2a
contribution by Monod and Jacob **8:**263:1a
description **19:**715:1b, *illus.*
for a list of related subjects see PROPAEDIA: Section 339
Opet, *or* Taurt festival (anc. Egy. festival) **8:**965:2b
celebrated by Ramses II **9:**927:3b
Opet (Egy. deity): *see* Taurt
"Opfergang, Der" (work by von Unruh): *see* "Way of Sacrifice"
Ophichthus ophis (marine fish): *see* spotted snake eel
ophicleide (mus. instru.) **8:**965:3a
brass wind instrument **24:**696:1b
for a list of related subjects see PROPAEDIA: Section 624
ophidiophobia (psych.)
avoidance behaviour **14:**657:2b
Ophiocistioidea (zool.)
classification of Echinodermata **17:**893:1a, *illus.* 891
Ophiocoma imbricatus (species of echinoderm)
examples of brittle star *illus.* **2:**535
Ophioderma brevispina (species of echinoderm)
examples of brittle star *illus.* **2:**535:1b
Ophiodon elongatus (fish): *see* lingcod
Ophioglossaceae (family of plants) **8:**965:3b
for a list of related subjects see PROPAEDIA: Section 313
Ophioglossales (bot.)
inclusion of ferns **19:**167:1a
Ophioglossum (genus of plants)
description and distribution **8:**966:1a
plant reproduction **26:**665:2a
Ophiolite sequence (geol.)
formation of igneous rocks **17:**570C:1a
Ophiophagus hannah (reptile): *see* king cobra
Ophios (Egy. deity): *see* Khenty-Imentiu
Ophiostoma ulmi (fungus)
cause of Dutch elm disease **1:**619:2b
Qphiothrix fragilis (species of Echinoderm)
example of brittle star **2:**535:1b
Ophiousa (is.. Gr.): *see* Tinos
Ophir (bibl. reg.) **8:**966:1a
Ophis (Egy. deity): *see* Khenty-Imentiu
Ophite (member of Gnostic sect) **8:**966:1a
interpretation of the Fall of man myth **16:**357:2b
view of cosmos **26:**596:1a
ophitic texture (geol. feature)
occurrence in igneous rocks **24:**205:2b
Ophiuchus (constellatipn)
constellations *table* **28:**225
Ophiuroidea (class of echinoderm)
classification of echinoderms **4:**349:2b
Ophrys (genus of orchids) **8:**966:1b
mimicry of female insects **14:**1009:2a; **24:**113:2b, *illus.* Plate I fol. 114
pollination by bees and wasps **13:**811:2b
for a list of related subjects see PROPAEDIA: Section 313
Ophrys apifera (bot.): *see* bee orchid
Ophrys insectifera (bot): *see* fly orchid
ophthalmic nerve (physiol.)
major ref in Nerves and Nervous Systems **24:**822:2a, *illus.* 820
ophthalmology **8:**966:2a
comparison with optometry **8:**973:1a
study of visual disorders **27:**203:2a
ophthalmometer (instru.)
invention by Helmholtz **20:**564:2a
ophthalmoplegia
arteritis complications **1:**600:3a
ophthalmoscope (instru.) **8:**966:2b
development by Allbutt **1:**276:3a
invention by Helmholtz **20:**564:2a
use in eye examination **27:**203:2a
Ophüls, Max, *or* Max Opuls (Ger.-Fr dir.) **8:**966:3a
adaptation of Schnitzler's work **10:**530:1b
motion picture history **24:**401:1a
opianic acid (biochem.)
product of alkaloid oxidation **15:**875:1a
opiate (drug)
drugs and drug action **17:**499:2a, 510:1a
Opid, Helena (Pol. act.): *see* Modjeska, Helena
Opie, Eugene Lindsay (Am. path.) **8:**966:3b
Opie, John (Br. paint.) **8:**967:1a
Opificio **delle** Pietre Dure (workshop, Florence, It.): *see* Workshop for Hard Stone
dpik, Ernest Julius (Estonian astron.) **8:**967:1b
orbits of asteroids **27:**576:2b
Opilioacariformes (zool.): *see* mite
Opiliones (arachnid): *see* daddy longlegs
opinion
distinguished from knowledge by Plato 24:**1**:2a
opinion official (Chin. hist.)
Sung dynasty **16:**99:1a, 102:2a
opioid (chem.)
classification of analgesics **17:**500:1b
function as neuromodulator **18:**408:2a
Opis (anc. Mesop. city)
army mutiny against Alexander the Great **13:**247:2a
opisthobranch, *or* sea slug (zool.) **8:**967:2a
major ref in Mollusks **24:**306:2b *passim to* 318:2b
description 5:142:2a
human consumption **19:**281:1b
for a list of related subjects see PROPAEDIA: Section 313
see also species of sea slug, *e.g.,* Elysia viridis
Opisthobranchia (zool.)
subclass of Gastropoda **24:**320:1a
opisthocoelus (anat.)
characteristics of salamanders **13:**429:1a
Opisthocomus hoazin (bird): *see* hoatzin
Opisthonema oglinum (fish): *see* Atlantic thread herring
Opisthopora (worm)
classification of Annelida **13:**844:2b
Opisthorchiida (worm)
taxonomy of Platyhelminthes **19:**298:2a
Opisthorchis **sinensis** (flatworm): *see* Chinese liver fluke
opisthosoma (anat.): *see* abdomen
Opitz von Boberfeld, Martin (Ger. poet) **8:**967:2a
contribution to German literature **20:**30:1a
influence on Fleming **4:**827:3b
opium (drug) **8:**967:2b
major ref. in Drugs and Drug Action **17:**501:1a
denvation from poppy **9:**125:2b; **9:**609:1b; **13:**679:1a
production and trade
British opium trade
China and India **16:**123:2a; **21:**95:2b
Hong Kong **6:**38:2b
Burma **10:**694:3a
properties
alkaloid-based drugs **15:**871:1b
codeine **3:**426:3b
paregoric **9:**149:1a
use as anesthetic **1:**397:3b
use in
drug cults **13:**242:2a
drug use studies **13:**230:2b *passim to* 234:1a, 240:1b
for a list of related subjects see PROPAEDIA: Section 321
see also codeine: morphine
"Opium et **le bâton,** L' " (work by Mammeri)
discussed in biography **7:**753:1a
"Opium of the Intellectuals," *or* "L'Opium des Intellectuels" (work by Aron)
discussed in biography **1:**583:2b
opium poppy, *or* Papaver somniferum (bot.)
colour picture *illus.* Plate 3 fol. **25:**898
description **9:**609:1b
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poisonous plants **9:**548:1b; *table* **25:**904
source of
opium **8:**967:2b; **9:**125:2b

poppy seed **9:**609:2a
Opium Wars (Chin. hist.) **8:**967:3b
abolishment of Canton system **2:**818:3a
effect on
China 16:123:2b
Canton **15:**566:1b
Chinese literature **16:**238:1a
Kwangsi 16:184:2b
Peking **25:**473:2a
Tientsin **28:**652:1a
Hong Kong **6:**38:3a; **20:**703B:1b
Japan **22:**323:1b
role of
European explorations **18:**883:1a
Lin Tse-hsii **7:**367:3b
see also Arrow War
Oplophoridae (biol.)
classification **16:**855:1a
Opobo (Nig.): *see* Ikot Abasi
Opoku Ware (Af. chief)
role in Ashanti empire **1:**621:2a
Opole (prov., Pol.) **8:**968:1a
location *map* **25:**912
Opole, *or* Oppeln (Pol.) **8:**968:1b
location *map* **25:**913
Opole, principality of (medieval state)
capital at Opole **8:**968:1b
Oporto (Port.): *see* Porto
opossum, *or* possum (mammal) **8:**968:1b
major ref: in Mammals **23:**399:1b
aggressive behaviour **14:**659:2b
eye adaptation **27:**140:2b, *illus.*
gestation period *table* **5:**227
for a list of related subjects see PROPAEDIA: Section 313
opossum shrimp, *or* mysid, *or* possum shrimp (crustacean) **8:**968:3a
habitat **4:**575:2a
for a list of related subjects see PROPAEDIA: Section 313
Opous (anc. city, Gr.): *see* Opus
Opoyaz, *or* Society for the Study of Poetic Language (lit. group)
development of Formalism **4:**883:3b
Oppel, Carl Albert (Ger. geol. and paleon.) **8:**968:3b
contribution to Jurassic Period classification **19:**873:2b
definition of Zones **19:**756:2a
Oppeln (Pol.): *see* Opole
Oppenheim, Edward Phillips (Br. au.) **8:**968:3b
Oppenheim, Lassa Francis Lawrence (Ger. jur.) **8:**969:1a
Oppenheim, Meret (art.)
fantasy sculpture 27:109:2a
Oppenheim, **Moritz** (Ger. art.)
portrait of Heine *illus.* **5:**805
Oppenheimer, Sir Ernest (S.Af. indus.) **8:**969:1a
Oppenheimer, **Julius** Robert (Am. phys.) **8:**969:1b
association with Teller **11:**618:3a
attitude toward atomic bomb **21:**809:2b; **28:**481:1a
contribution to
astronomy **26:**537:1a
Manhattan Project **7:**775:2a
nuclear weapons development **29:**578:1b
Oppenheimer, Samuel (Aus. banker)
role in Austria **14:**498:1b
Opperman, D.J. (S.Af. poet)
contribution to South African literature **11:**34:2b
Oppia, Lex (Roman legis.)
support by Cato the Elder **2:**959:1b
oppida (settlement): *see* hill fort
Oppidum Gerunda (Sp.): *see* Gerona
Oppland (co., Nor.) **8:**970:1a
Opportunist Party (Fr. hist.)
role in Third Republic **19:**512:2a
opportunistic infection (path.)
acquired immune deficiency syndrome **1:**67:2b
"Opportunity" (period. by Johnson)
discussed in biography **6:**592:1b
opportunity cost (econ.)
comparative advantage 3502:1b
economic planning **17:**924:2a
value theory **17:**943:1b
opposed-piston engine
fuel-injected gasoline engine 183479:1b, *illus.*
opposites, table of (philos.) **8:**970:1a
Pythagoreanism 25587:1b *passim to* 589:2a
opposition (astron.) **8:**970:1b
opposition, square of (logic) **8:**970:1b
syllogistic proposition **23:**262:2b, *illus.*
opposition, theory of (logic)
history **23:**236:1a
Oppressed Nationalities, Congress of (Eur. hist.)
effect on
Austria **14:**515:1b
Czechoslovakia **16:**924:1b
unification of South Slavs **14:**581:2a
oppression (law)
definition and application **16:**804:2b
oprichnina (Russ. private estate) **8:**970:2a
formation and function **6:**439:3b
history **28:**974:2b
Opsanus tau (biol.): *see* oyster toadfish
opsin (biochem.)
biocbromes and visual perception **16:**592:2b
function **12:**399:3b; **27:**188:2b
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Opsomer, **Isidore** (Belg. paint.)
portrait of Huysmans *illus.* 6:181
opsonin (biochem.)
function in immune response **21:**530:1a
"opstandigen, De" (work by Ammers-Kuller): *see* "Rebel Generation, The"
Optatus of **Milevis** (Patristic lit.)
significance to Christianity **16:**312:2b
Optic, Oliver (Am. au.): *see* Adams, William Taylor
optic atrophy (path.) **8:**970:2b
for a list of related subjects see PROPAEDIA: Section 423
optic axis (crystall.)
property of double refraction **4:**193:1b
optic chiasm (anat.)
human visual system **27:**189:2b, *illus.*
optic nerve **24:**822:1a, *illus.* 820
optic computing (computer sci.)
description **16:**629:1b
optic cup (embryol.)
animals **20:**446:1b
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optic disk (anat.): *see* blind spot
optic foramen (anat.)
eye **27:**171:2b
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optic gland (anat.)
function in invertebrates **18:**402:2a
optic nerve, *or* second cranial nerve (anat.) **8:**970:2b
major ref: in Nerves and Nervous Systems 24822:1a, *illus.* 820, 821
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autonomic nervous system *illus.* 24831
diseases and disorders **24:**850:1b; **27:**200:2a
embryological development **20:**462:1b
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photoreception 27:151:2a
for a list of related subjects see PROPAEDIA: Section 421
optic neuritis (path.) **8:**970:3a
study by Grafe **5:**404:3b
for a list of related subjects see PROPAEDIA: Section 423
optic tract (anat.)
cranial nerves *illus.* **24:**820
human visual system 27:190:1a, *illus.* 189
optic vesicle (anat.)
formation in animal embryos **20:**446:1b
"Optica" (work by Ptolemy)
discussed in biography **9:**776:1a
"Optica **Promota"** (work by Gregory)
discussed in biography **5:**485:3b
"Opticae thesaurus Alhazen libri vii" (work by Alhazen)
discussed in biography **1:**267:2b
optical activity (phys.) **8:**970:3b
demonstration by light waves **23:**6:1a
indication of life **22:**994:2b
property of
alkaloids **15:**877:1b
amino acids **14:**862:1b, 866:2b
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for a list of related subjects see PROPAEDIA: Section 122
optical antipode (chem.): *see* enantiomorph
optical art: *see* Op art
optical axis (optics) **8:**970:3b
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optical brightener, *or* fluorescent whitening agent, *or* optical bleach (chem.)
major ref in Chemical Process Industries **21:**262:2b
use in textile finishing **21:**522:2b
optical character recognition system, *or* OCR
computerized typesetting **3:**509:1b
postal systems **25:**1078:1a
optical crystallography 83971:1a
for a list of related subjects see PROPAEDIA: Section 125
optical depth (phys.)
property of atmospheres **13:**589:1a
optical disk mass-storage system
information storage 16644:1b
optical double resonance (phys.)
measurement of radio-frequency spectra **13:**586:1a
optical engineering
analytical and monitoring instrumentation **23:**775:2a
applications
lighting devices **23:**32:2b
microscope design **23:**744:1b
motion pictures **24:**430:2b
optical fibre (tech.)
major ref in Industrial Glass and Ceramics **21:**242:2b
total internal reflection **11:**863:2a
wave guide **12:**533:2a
see also fibre optics
optical illusion
major ref: in Human Perception **25:**490:1a
mathematical aspects 256:1b
Op art **8:**960:1a
optical image (optics) **8:**971:1b
conversion of photocathode image **9:**402:3a
Gullstrand's theory **5:**566:3b
holography 6:15:1b
microscope design principle **23:**742:2a
microscopic magnification **23:**749:2b
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for a list of related subjects see PROPAEDIA: Section 128
optical interferometer (instru.) **8:**971:1b
high-speed air flow studies **6:**15:3b
Michelson-Morley experiment **8:**98:3a
optical invariant (optics)
major ref: in Principles of Optics **25:**206:1a
optical isomerism (phys.)
major refs. in isomerism **6:**418:1b; Molecules **24:**281:2b
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optical lever system (vision)
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optical-mechanical scanner (instru.)
use in remote sensing **19:**34:1b
optical mineralogy
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optical model (nuclear phys.) **8:**971:3a
optical path difference, *or* OPD (optics)
light waves and lenses 25209:1b
optical printer (cinematic device)
major ref: in Motion Pictures **24:**436:2b
optical printing (pbot.)
use in motion-picture production **24:**435:1a
optical pumping (phys.) **8:**971:3a
laser operation 7:170:3b
for a list of related subjects see PROPAEDIA: Section 128
optical-pumping magnetometer (instru.)
use in scientific exploration **19:**34:2a
optical pyrometer (instru.)
use in thermometry **23:**739:2b
optical range finder (instru.).
range finder **9:**935:2a
optical region (radar)
range **23:**764:1a
optical scanning
digital computer input capability **16:**643:2a
optical sound recording **8:**971:3b
major ref: in Sound **27:**622:2b
De Forest's contribution **3:**929:2a
digital versus analogue recording **27:**626:2a
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sound recording **11:**28:3a
sound track technology **11:**28:3b
optical surveillance (police sci.)
use in criminal investigations **25:**949:1a
optical twinning, *or* Brazil twinning (crystall.)
quartz **24:**165:2b
"Opticks" (work by Newton)
discussed in biography **24:**893:1b
history of science **27:**39:1b
science of optics **25:**838:1b, 840:2b
theory of colour perception **26:**325:2a
optics **25:**202:1a; **8:**971:3b
major ref: in Physical Sciences **25:**843:1a
applications
glass products **21:**237:1a *passim to* 243:1b
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painting **25:**307:1b, *illus.*
historical research **25:**837:2a *passim to* 840:2b
Alhazen **1:**267:2b
Amici **1:**340:3a
Barlow **1:**901:2b
Campani **2:**773:3a
Dallmeyer **3:**859:1b
Divini **4:**133:3b
Dollond, John **4:**158:1a
Dollond, Peter 4:158:1a
Grosseteste **25:**753:2a
Hall **5:**639:1a
Hamilton **5:**662:3a
Kepler **22:**506:1a
medieval scientists **27:**36:1b
Ptolemy **9:**776:1a
Schmidt **10:**527:3b
Short **10:**760:2b
Strong **11:**324:1a
principles
electro-optic phenomena **18:**266:1b
lenses
microscope **23:**741:2a
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photography **25:**775:2a
light **23:**1:2a, 4:1b
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refraction **13:**570:2b
sensory reception
photoreceptive mechanisms **27:**148:1a
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wave mechanics analogy **23:**879:1a
for a list of related subjects see PROPAEDIA: Section 128
see also geometrical optics; optical engineering; and the subject matter of optics, *e.g.,* colour; lens; light

"Optics" (work by Euclid)
discussed in biography **4:**589:3b
optimal control problem (math.)
automated systems **14:**532:1b
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optimization procedures **25:**224:2a
optimal filter, *or* Kalman filter (math.)
navigational use 24756:1b
optimization theory **25:**224:2b
optimal strategy (game theory)
optimization theory **19:**645:2b
Optimates (Roman pol.) **8:**972:2a
Cato the Younger **2:**959:2b
Cicero **3:**314:3a
Pompey **9:**593:1a
see also Populares
Optimisticheskaya Cave (cave, U.S.S.R.)
gypsum cave **16:**746:1b
optimization, mathematical theory of **25:**217:1a; **8:**972:2b
major ref: in Numerical Analysis **25:**47:1b
use in
chemical engineering **18:**556:1b
operations research **21:**214:1a
systems engineering **21:**219:2a
optimization studies, or trade-offs (indus. engin.)
systems engineering **21:**219:2b
"optimo senatore, **De**" (work by Goslicki): *see* "Accomplished Senator, The"
option contract, *or* option (bus.)
securities trading **23:**557:2b
Optional Municipal Code (U.S. hist.)
significance to Washington **29:**457:1b
optional referendum, *or* facultative referendum (pol.)
use in politics **9:**993:2b
optokinetic nystagmus
eye movement **25:**482:2a; **27:**179:1a
optometry **8:**972:3b
for a list of related subjects see PROPAEDIA: Section 424
Optype (print.)
preparation **26:**79:1b
Opuls, Max (Ger. dir.): *see* Ophüls, Max
Opuntia (bot.) **8:**973:1a
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for a list of related subjects see PROPAEDIA: Section 313
Opuntia bigelovii (plant): *see* jumping cholla
Opuntia ficus-indica (bot.): *see* prickly pear
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"Origins of the Synagogue and the Church, The" (work by Kohler)
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"Origins of the World War" (work by Fay)
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"Protreptikos," *or* "Exhortation" (work by Clement of Alexandria)
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Proval Bay (bay, U.S.S.R.)
formation **1:**805:1a
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Provence, Estates of (Fr. hist.)
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discussed in biography **5:**396:3a
"Proverbios morales" (work by Carrión de los Condes)
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"Proverbs in Porcelain" (work by Dobson)
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"Proverbs of Alfred, **The"** (Middle Eng. work)
place in English literature **18:**572:1b
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Providence (Md., U.S.): *see* Annapolis
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Baltic religions **18:**907:2a
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Provincial Normal School (school, Toronto, Ont., Can.)
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Provisional Government (Russ. rev.)
major ref in Union of Soviet Socialist Republics **28:**996:2b
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history of Laos **27:**816:2b
Provisional Military Administrative Council, *or* PMAC. *or* Dergue (Eth. pol. org.)
role in Ethiopia **4:**580:1a: **17:**827:2b
Provisional People's Committee for North Korea (N.Kor. hist.)
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Provisional **Revolutionary** Government of South Vietnam, *or* PRG (Viet. hist.)
association with Viet Cong **12:**359:3a
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Provisors, Statute of (Br. hist.)
1351
policies of Edward III **4:**377:1a; **29:**41:2b
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effect on nutritional deficiency **25:**66:1b
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PRPP (chem. compound): *see* 5-phosphoribose 1-pyrophosphate
PRRA (U.S. agency): *see* Puerto Rican Reconstruction Administration
Prthivi (Indian goddess)
role in Hindu mythology **20:**615:1a
"Prthviraj **Rasau,"** *or* "Prthvirajaraso" (poem by Chand Bardai)
Hindi literature **27:**731:1b
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Prthviraja **III** (Cauhan k.)
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PRUD (Sal. pol. party): *see* Revolutionary Party of Democratic Unification
"Prude, La" (play by Voltaire)
discussed in biography **29:**540:2b
"Prudence in Woman," *or* "La prudencia en la mujer" (work by Tirso dc Molina)
discussed in biography **11:**796:2b
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Prudential Building (Buffalo, N.Y., U.S.): *see* Guaranty Building
Prudential Insurance Company of America, *or.* Prudential Friendly Society (Am. Co.)
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Prud'hon, Jean (Fr. engr.)
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discussed in biography **4:**452:2b
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Prugger, Nikolaus (art.)
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Prunella **collaris** (bird): *see* alpine accentor
Prunella **vulgaris** (bot.): *see* self-heal
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Prunus armeniaca (bot.): *see* apricot
Prunus **domestica** (bot.):*see* European plum
Prunus dulcis (bot.): *see* almond

Prunus institia (bot.): *see* Damson plum
Prunus laurocerasus (bot.): *see* cherry laurel
Prunus persica (bot.): *see* peach
Prunus persica **nectarina** (bot.): *see* nectarine
Prunus serotina (bot.): *see* black cherry
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Prunus vase (pottery): *see* mei p'ing
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Prusias I (k. of Bithynia)
  association with Hannibal **5**:684:3a
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Prusmyk **. . . .** (in geographical names): *see under* substantive word, except as below
Prusmyk Dukielska (mt. pass, Eur.): *see* Dukla Pass
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      Laibach Congress **7**:105:1a
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      Austria **14**:497:2a
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      Alexander I **1**:243:1a
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      Austrian Succession War **1**:721:1b
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Prussian blue (pigment) **9**:753:2b
  classification of coordination compounds **15**:900:2a
  for a list of related subjects see PROPAEDIA: Section 122
Prussian Civil Code, *or* Allgemeines Landrecht **9**:753:3a
Prussiau language, Old: *see* Old Prussian language
Prussian Tariff of 1818 (Prussian hist.)
  effect on foreign trade **21**:834:2b
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Prut River, *or* Pruth River, *or* Prutul River (riv., Eur.) **9**:753:3b
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Prutkov, Kozma (Russ. writ.): *see* Tolstoy, Aleksey Konstantinovich
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"Prvni **parta"** (work by Capek): *see* "First Rescue Party, The"
Pryderi (Celt. deity)
  relationship to Pwyll **9**:818:1b
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Prydnyaprouskaya **Nizina** (lowland, U.S.S.R.): *see* Dnepr Lowland
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  production by Prymnesium parvum **25**:902:2b
Prymnesium parvum (zool.)
  cause of fish death **25**:902:2b; **26**:307:1b
Prynne, William (Eng. pamphleteer) **9**:753:3b
  association with Bastwick **1**:951:3a
  persecution by Laud **7**:188:1a
  role in English history **29**:59:2b
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  exchange for Abel **1**:25:2b
Prys, Edmund (Welsh writ.)
  contribution to Welsh literature **15**:630:2a
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prytaneion (anc. Gr.): *see* prytaneum
prytaneis (anc. Gr. govt.) function in ancient Athens **4**:347:2a
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  construction in Olympia **8**:924:1b
"Przedswit" (work by Krasinski)
  discussed in biography **6**:982:2a
  Polish literature **25**:956:2a
Przelecz . . . . (in geographical names): *see under* substantive word, except as below
Przelecz Dukielska (mt. pass, Eur.): *see* Dukla Pass
Przemysl (prov.. Pol.) **9**:754:2a
  location *map* **25**:912
Przemysl (Pol.) **9**:754:2b
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  role in Polish history **25**:922:2b
Przesmycki, **Zenon,** *or* Miriam (Pol. writ.)
  contribution to Polish literature **25**:957:1b
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  discussed in biography **11**:222:3a
Przeval'sk (U.S.S.R.): *see* Przhevalsk
Przewalski's horse, *or* Przhevalsky's horse, *or* Prejevalsky's horse, *or* Preyevalsky's horse, *or* Equus caballus przewalski (mammal) **9**:754:2b
  breeding at Prague Zoo **9**:662:3b
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  for a list of related subjects see PROPAEDIA: Section 313
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  discussed in biography **5**:329:3b
Przhevalsk, *or* Przeval'sk, *or* Karakol (U.S.S.R.) **9**:754:3a
Przhevalsky, Nikolay Mikhaylovich (Russ. expl.) **9**:754:3a
  death at Przhevalsk **9**:754:3a
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Przhevalsky's horse: *see* Przewalski's horse
Przybyslaw, *or* Pribislav (Ger. prince)
  relationship with Holy Roman Empire **8**:854:1a
Przybyszewski, Stanislaw (Pol. au.) **9**:755:1a
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Przysucha, Jacob Isaac **ben Asher,** *or* Jacob Isaac of Przysucha. *or* Jacob Isaac ben Asher Pshishkhah, *or* ha-Yehudi, *or* ha-Yehudi ha-Kadosh (Jewish Hasidic leader) **9**:755:1a
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Psalliota campestris (bot.): *see* Agaricus campestris
Psallus seriatus (insect): *see* cotton fleahopper
psalm tone (vocal mus.) **9**:755:1b
  use in Ambrosian chant **1**:321:1b
  for a list of related subjects see PROPAEDIA: Section 624
Psalmanazar, George (Fr. forger)
  literary forgery **14**:136:2b
"Psalmenstudien" (work by Mowinckel): *see* "Psalms in Israel's Worship, The"
"Psalmes, Songs and Sonnets" (work by Byrd)
  discussed in biography **2**:695:1b
"Psalmi Davidis Poenitentiales" (work by Lassus)
  discussed in biography **7**:175:1a
"Psalmodia polska" (epic by Kochowski)
  discussed in biography **6**:928:2a
  Polish literature 25955:1b
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  relation to hymn **6**:199:2a
  for a list of related subjects see PROPAEDIA: Section 624
Psalms, *or* Psalter. *or* Tehillim (biblical lit.) **9**:755:2b
  major ref: in Biblical Literature **14**:797:1a
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  Dutch translation by Marnix **7**:867:1a
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    Bourgeois **2**:428:2b
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  for a list of related subjects see PROPAEDIA: Section 826
"Psalms in Israel's Worship, The," *or* "Studies in the Psalms," *or* "Psalmenstudien" (work by Mowinckel)
  discussed in biography **8**:382:1b
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"Réfutation du catéchisme du sieur Paul Ferry" (work by Bossuet)
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"Refutation of All Heresies" (treatise by Hippolytus)
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"Refutation of Idealism" (work by Moore)
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Regalecus (zool.): *see* giant oarfish

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"Regard du roi, Le" (work by Laye): *see* "Radiance of the King, The"

"Regards et jeux dans l'espace" (work by Garneau)
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Reggio, Isaac Samuel (It. au.)
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"Regimen Sanitatis Salernitanum" (work by Salernitan school)
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"Règle du jeu, La" (film by Renoir): *see* "Rules of the Game, The"
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gunnellus, *or* rock eel (zool.)
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Shisha Pangma (mt., China): *see* Gosainthan
Shishak I (k. of Egy.): *see* Sheshonk I
Shishakli, Adib ash- (Syr. mil. of.) **10:**751:3a
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Bulgaria **15:**358:1b
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Shivpuri, *or* Narwar Zila (dist., India)
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Shivpuri, *or* Sipri (India) **10:**752:1b
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priesthood and soothsayers **24:**90:2b
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Shlomo Yitzhaqi (Fr. rel. scholar): *see* Rashi
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"Shmuel-bukh" (Yiddish work)
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Shoalhaven River (riv., N.S.W., Austr.) **10:**753:1b
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"Shoe: Willie Shoemaker's Illustrated Book of Racing, The" (work by Smith)
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shoebill, *or* shoe-billed stork, *or* whale-headed stork, *or* Balaeniceps rex (bird) **10:**755:1a
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Shoemaker, Bill, *or* The Shoe, *or* William Lee Shoemaker, *or* Willie Shoemaker (Am. jockey) **10:**755:1b
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"Shoes of the Fisherman, The" (work by West)
discussed in biography **12:**587:3a
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interest in handgun shooting **10**:758:3a
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major ref. in Art of Motion Pictures **24**:412:1b
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"Shop Window: Tailor Dummies" (photograph by Atget)
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shopping centre, *or* shopping mall, *or* shopping plaza (marketplace) **10**:759:3a
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Shorey, Paul (Am. schol.) **10**:760:2a
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description **5**:303:2a; *illus.* **23**:400
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"Short History of the Communist Party of the Soviet Union, A" (work by Stalin)
Marxist theory **23**:582:2a
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for a list of related subjects see PROPAEDIA: Section 313
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American literature **13**:417:1b
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"Short Story Monthly," *or* "Hsiao-shuo Yüeh-pao" (Chin. period.)
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"Short Study of the Development of the Libido, Viewed in the Light of Mental Disorders, A" (work by Abraham)
discussed in biography **1**:37:3b
short-tailed porcupine, *or* Echinoprocta rufescens (rodent)
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short takeoff and landing airplane: *see* STOL airplane
short-term capital movement (econ.)
use in international trade **21**:843:2b, 848:1b
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"Short Time for Insanity: An Autobiography, A" (work by Wellman)
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"Short Treatise on the Game of Whist, A" (work by Hoyle)
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"Short View of the Immorality and Profaneness of the English Stage, A" (work by Collier)
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"Short View of Tragedy, A" (work by Rymer)
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"Shorter Rules" (work by Basil the Great)
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shorthand, *or* brachygraphy, *or* stenography, *or* tachygraphy **10**:762:1a
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Bales **1**:830:3b
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Soleure (Switz.): *see* Solothurn

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"Soziallehren der Christlichen Kirchen und Gruppen" (work by Troeltsch): *see* "Social Teachings of the Christian Churches, The"
"Sozialreform oder Revolution" (work by Luxemburg): *see* "Reform or Revolution"
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"Soziologie des Parteiwesens in der modernen Demokratie, Zur" (work by Michels): *see* "Political Parties: A Sociological Study of the Oligarchical Tendencies of Modern Democracy"
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see also game; Olympic Games; sporting record; sports, history of; specific sports, *e.g.,* air racing, archery, association football, athletics, automobile racing, badminton, baseball, basketball, bobsledding, bowling, boxing, Canadian football, canoeing, cricket, curling, cycling, dog racing, fencing, field hockey, fishing, football, golf, gymnastics, handball, horse racing, hunting, ice hockey, ice skating, jai alai, judo, karate, motorboating, motorcycling, pigeon racing, polo, roller-skating, rowing, rugby, shooting, show jumping, skiing, skydiving, squash, swimming, table tennis, tennis, tobogganing, volleyball, water skiing, weightlifting, wrestling, and yachting; and athletes by name;
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"Sports and Pastimes of the People of England, The" (work by Strutt)
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"Sportsman's Sketches, A," *or* "Sportsman's Notebook," *or* "Zapiski okhotnika" (work by Turgenev)
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"Sposizioni di Vangeli" (work by Sacchetti)
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spotted coralroot, *or* Corallorhiza maculata (bot.)
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Thyroptera (bat): *see* disk bat
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major ref. in Biochemical Components of Organisms **14:**907:1b
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drugs and drug action **17:**514:1a
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"Ti con zero" (work by Calvino): *see* "T zero"
Ti-Hsiang (Chin. leader): *see* Sun Yat-sen
Ti Hsin, *or* Ti-hsin-shou (Chin. emp.): *see* Chou
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Ti-k'ai-chia-tü (Chin. emp.): *see* Wo-chia
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Tianjin (China): *see* Tientsin
Tianlong Shan (cave temples, China): *see* T'ien-lung Shan
Tianshui (China): *see* T'ien-shui
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Tibet, Plateau of, *or* Ch'ing-tsang Kao-yuan, *or* Qingzang Gaoyuan, *or* Tibetan Highlands, *or* Tibetan Plateau, *or* Tsinghai–Tibet Plateau (plat., As.) **11:**756:2b
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Tibetan bear (mammal): *see* Asiatic bear

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Tibetan literature **11:**757:1b
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Tibetan Plateau (plat., As.): *see* Tibet, Plateau of

Tibetan sand fox, *or* Vulpes ferrilata (mammal)
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Tibetan script (writing system)
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Tibetic languages, *or* Bodic languages
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Tibeto-Burman (people)
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Tibi Dam, *or* Alicante Dam (dam, Sp.)
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Tibidabo (mt., Sp.)
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"Tiburon" (work by Tennant)
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Tic polonga (reptile): *see* Russell's viper

Tichatschek, Joseph Aloys (Ger. opera singer) **11:**758:1a

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Tichoretsk (U.S.S.R.): *see* Tikhoretsk

Ticino, *or* Tessin (canton, Switz.) **11:**758:1b

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Tickell, Thomas (Eng. writ.) **11:**759:1a
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Ticker, Reuben (Am. opera singer): *see* Tucker, Richard

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"Ticket That Exploded, The" (novel by Burroughs)
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Tickhill Psalter (medieval prayer book)
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Ticuna (people): *see* Tucuna

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tidal prism (hydrology)
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see also Earth tide; tidal friction; tidal power

"Tide of Fortune, The," *or* "Sternstunden der Menschheit" (work by Zweig)
discussed in biography **12:**945:2b

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description **1:**366:3b

"Tides and Kindred Phenomena in the Solar System, The" (work by G.H. Darwin)
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Tidewater, *or* Coastal Plain (reg., Va., U.S.) **11:**760:2b
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"Tidings brought to Mary," *or* "L'Annonce faite à Marie" (work by Claudel)
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Aurora borealis as Valkyrie **26:**574:2a
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Valladolid, University of, *or* Universidad de Valladolid **12:**247:2b
medieval universities **18:**33:2a
Valladolid de Santa María de Comayagua (Hond.): *see* Comayagua
Vallala Sena (Bengal ruler)
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Valle de Ordesa, Parque Nacional del, *or* Parque Nacional del Río Ara (park, Sp.)
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Vallejo, César Abraham (Peruvian poet) **12:**248:3b
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Vallejo, Mariano Guadalupe (Mex. gen.)
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for a list of related subjects see PROPAEDIA: Section 232
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Valley City (N.Dak., U.S.) **12:**249:3b
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Valley Forge (U.S. hist.) **12:**250:1a
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Washington's tenacity **29:**721:1a
valley glacier: *see* alpine glacier
valley oak (bot.): *see* California white oak
Valley of . . . : *see under* substantive word, *e.g.,* Ten Thousand Smokes, Valley of the
Valley Pike (Hwy., U.S.)
feature of Shenandoah Valley **10:**723:2b
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Valli, Romolo (It. act.) **12:**250:1b
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Vallisneria spiralis (aquatic plant)
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Valmarana, Palazzo (palace, Vicenza, It.)
design by Palladio **9:**87:2b
Valmiki (Hindu sage)
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Indian theatre **27:**755:2b
Valmy, Battle of (Eur. hist.)
effect on
Franco-Prussian conflict **18:**763:1b, *map* 764
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Valmy, François-Christophe Kellerman, duc de (Fr. gen.): *see* Kellermann, François-Christophe, duke de Valmy
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France **4:**920:1b; **19:**467:1b
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Valona (Alb.): *see* Vlorë
"Valor of Ignorance, The" (work by Lea)
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major ref. in Valsad **12:**251:2b
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Valsalva, Antonio Maria (It. anat.)
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role in human respiration **26:**787:1a
Valsbaai (bay, S.Af.): *see* False Bay
Valsequillo (archae. site, Mex.)
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"Valsolda" (poetry by Fogazzaro)
discussed in biography **4:**857:3b
Valtellina, *or* Veltlin (val., It.) **12:**251:2b
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"Valter y Griselda" (trans. by Metge)
discussed in biography **8:**69:2b
Valturio, Robert (inv.)
history of automotive technology **28:**771:2b
valuation (econ.): *see* value
valuation (math.)
major ref. in Algebra **13:**290:2b
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"Valuation, Its Nature and Laws" (work by Urban)
treatment of axiology **1:**746:3a
value (colour theory)
property of colour **16:**596:1a
value (design)
aspect of sculpture **27:**44:1a
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major ref. in Economic Theory **17:**942:1b
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advertising and consumption **23:**551:1a
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concept of
accounting **13:**3:2a
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impact on property tax **28:**423:1a
place in
Communist economy **17:**923:1b
government spending evaluation **20:**199:1b, 211:1a
Marxism **23:**578:2a *passim to* 581:1b
problem in capital theory **17:**956:2a
see also utility
value (philos.)
compared to attitude **1:**687:3b
effect on
collective behaviour **16:**561:2b, 564:1a, 565:1b
public opinion **26:**354:1b
sociological research **27:**386:1b
philosophical definition **1:**746:3a
view of Logical Positivism **25:**767:1a
value, theory of: *see* axiology
value-added margin (econ.)
place in tariffs **21:**829:1a
value-added tax, *or* VAT **12:**251:3a
role in European tax systems **20:**201:2b
sales and excise taxes **28:**426:2b
for a list of related subjects see PROPAEDIA: Section 534
value-added theory (sociol.)
description of social movements **16:**562:2b
"Value and Capital" (work by Hicks)
discussed in biography **5:**911:2b
Value Creation Educational Society, *or* Value Creation Society (Japanese rel.): *see* Sōkagakkai
value engineering (indus. engin.)
role in business management **21:**227:2b
valvassores (It. soc. group)
policies of Conrad II **3:**546:1b
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circulatory system **16:**379:1a *passim to* 398:1b
for a list of related subjects see PROPAEDIA: Section 336
see also heart valve
valve (electronics): *see* electron tube
valve (mech.) **12:**252:1a
use in
gasoline engines **18:**478:1a *passim to* 482:1b, *illus.* 481; **28:**778:1a
pneumatic devices **9:**533:3b
rockets and missile systems **18:**492:1b
sprinkler systems **19:**183:1b
valve (mus.) **12:**252:2b
brass instruments **24:**508:2b, 541:1b
French horns **4:**975:2b
wind instruments **24:**688:1a
for a list of related subjects see PROPAEDIA: Section 624
valve lifter (engine)
gasoline engines **18:**482:1b, *illus.* 481
Valverde (prov., Dom. Rep.) **12:**252:3a
valves of Houston (biol.)
role in rectum **9:**980:2b
Vamacara (Tantrist sect)
Hindu Tantrism **20:**604:1a
Vamana (Hindu myth.) **12:**252:3a
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ancient Slavic religious beliefs **18:**911:1b
vampire bat (zool.) **12:**253:1b
infectious animal diseases **23:**414:1a, *illus.* 413
for a list of related subjects see PROPAEDIA: Section 313
Vampyromorpha (cephalopod order)
characteristics **24:**331:2a
Vampyrum spectrum (bat): *see* American false vampire bat
"Vamsa Bhaskara" (work by Suryamal Misrama)
Rajasthani literature **27:**737:1a
van (in proper names): *see* below and *see also* names spelled with no space after "van" (*e.g.,* Vanbrugh, Sir John). *See also under* substantive part of name (*e.g.,* Leeuwenhoek, Antonie van)

Van (Tur.) **12:**253:2a
Van, Lake, *or* Arsissa Lacus, *or* Thospitis Lacus, *or* Van Gölü (l., Tur.) **12:**253:3a
  city of Van **12:**253:2b
  history of Armenian speaking peoples **22:**683:2b
  lava-encircled lakes in Asia **14:**175:1b
  physiography of Turkey **28:**891:2a
Van Alen, Willian (arch. designer)
  design of Chrysler Building **3:**290:3a
Van Allen, James Alfred (Am. phys.) **12:**253:3b
  discovery of radiation belts **12:**254:1a
  study of atmospheric sciences **17:**582:1b
Van Allen radiation belt 12:254:1a
  major ref. in Atmosphere **14:**327:2b
  discovery **19:**56:2b
    Explorer 1 **4:**634:2a
    International Geophysical Year **6:**350:1a
    Van Allen **12:**253:3b
  magnetic field of
    Earth **4:**321:1a; **17:**548:2b *passim to* 555:1a
    Jupiter **6:**658:3b
    Saturn **10:**469:2b
    Uranus **12:**196:3b
  for a list of related subjects see PROPAEDIA: Section 221

"De," "la," "van," and similar components of a name, when followed by a space, are alphabetized as separate words (e.g., De Forest, Lee). When they are joined to the following part of a name, the combination is treated as a single word (e.g., DeForest, John William).

Van Alstyne, Fanny (Am. hymn writ.): *see* Crosby, Fanny
Van Amburgh, Isaac A. (Am. circus manager)
  role in circus history **25:**299:2b
Van Breda, H. L. (philos.)
  contribution to Husserl Archives **25:**638:2b
Van Buren (Ark., U.S.) **12:**254:2a
  location *map* **29:**158
Van Buren, Martin (pres. of U.S.) **12:**254:2a
  association with Jackson **6:**456:2a
  Eaton's influence **4:**340:2a
  president of the United States *table* **12:**153
  role in Free Soil Party **4:**964:3a
Van Cleef & Arpels (jewelry firm)
  significance in jewelry making **17:**481:2b
Van Cortland, Stephanus (Am. pol.) **12:**254:3b
Van de Graaff, Robert Jemison (Am. phys. and inv.) **12:**255:1a
  development of particle accelerators **25:**445:1a
Van de Graaff generator
  major ref. in Particle Accelerators **25:**446:1a, *illus.*
  development by Van de Graaff **12:**255:1a
  source of electromotive force **18:**227:2a
van de Kamp, Peter (astron.)
  stellar density **19:**628:1b
van de Velde (surname): *see under* Velde, *e.g.,* Velde, Adriaen van de
Van Deman, Esther Boise (Am. archae.) **12:**255:1b
Van Deman, Ralph Henry (U.S. gen.) **12:**255:2a
Van den Bergh Family (Du. fam.)
  historical background of Unilever company **12:**132:2a
van den Bergh, Sidney (astron.)
  classification of galaxies **19:**617:1b
Van den Berghe, Pierre L. (Am. sociol.)
  sociobiological theory for family study **19:**70:1b
van den Eeckhout, Gerbrand (Du. paint.)
  association with Rembrandt **26:**650:1a
"Van den vos Reinaerde" (work by Willem)
  discussed in
    biography **12:**665:3b
    Dutch literature **17:**529:2b
Van Depoele, Charles Joseph (Am. inv.) **12:**255:3a
van der . . . : *see under* substantive word, *e.g.,* Weyden, Rogier van der, except as below
van der Hoeve syndrome (path.)
  symptoms **8:**1034:1a
Van der Kloof irrigation canals (canals, S.Af.)
  development projects on Orange River **13:**127:2b
Van der Pol's equation, *or* Van der Pol's differential equation (math.)
  major ref. in Analysis in Mathematics **13:**500:1b
  application of differential equations **13:**478:1b
van der Waals forces (chem.) **12:**255:3a
  chemical requirements for life **22:**997:1a
  composition of matter **14:**340:1b
  occurrence in
    chemical bonding in solids **23:**647:1b
    gases **23:**697:2b
    inorganic compounds **15:**769:1b
    minerals **24:**127:2b, *illus.* 129
  type of chemical bonding **24:**300:2a
  use in
    atomic structure determination **14:**377:1a
    thermodynamics **28:**622:1a
Van Devanter, Willis (U.S. jur.) **12:**256:1a
  justice of the Supreme Court *list* **11:**405
Van Diemen Gulf (gulf, Austr.) **12:**256:1a
Van Diemen's Land (hist. colony, Tas., Austr.) **12:**256:1b
  history of Tasmania **14:**460:1b
  leadership of Arthur **1:**603:2a
Van Diemen's Land Folk Museum (Tas., Austr.)
  cultural life of Tasmania **14:**463:2a
Van Doren, Carl Clinton (Am. crit.) **12:**256:2a
Van Doren, Mark (Am. writ.) **12:**256:3a
Van Dyck, Sir Anthony, *or* Anthonie Vandyke (Flem. paint.) **12:**256:3b
  contribution to
    Baroque art **25:**356:2b, *illus.* Plate 15 fol. **25:**370
    Stuart style **11:**330:2a
  history of printmaking **26:**124:2b
  influence on
    Dobson **4:**143:2b
    Gainsborough **5:**76:2a
    Lely **7:**259:1a
    Reynolds **10:**13:2b
  portrait of
    Bristol, 2nd Earl of *illus.* **2:**525
    Buckingham, 1st Duke of *illus.* **2:**599
    Charles I **3:**112:1b, *illus.*
    Hamilton, 1st Duke of *illus.* **5:**659
    Henderson *illus.* **5:**829
    Wallenstein *illus.* **12:**470
    Wentworth **11:**298
  Rubens' influence **4:**829:1b
Van Dyke, Henry (Am. writ.) **12:**258:2b
van Gogh, Vincent (Du. paint.): *see* Gogh, Vincent van
Van Golu (l., Tur.): *see* Van, Lake
Van Hise, Charles Richard (Am. geol.) **12:**258:2b
van Honthorst, Gerrit (Du. paint.)
  influence on Rembrandt **26:**647:1b
van Hoogstraten, Samuel (Du. paint.)
  association with Rembrandt **26:**650:1a
Van Horne, Sir William Cornelius (Can. ry. exec.) **12:**258:3a
van Laer, Pieter (Du. art.)
  contribution to Bambocciati style **1:**853:2b
  influence on
    Both **2:**409:3b
    Wouwerman **12:**763:2a
Van Lang (legendary Viet. kingdom)
  founding by Hung Vuong **6:**152:2b
  history of Vietnam **27:**855:1a
Van Loo, Charles-André, *or* Carle Vanloo (Fr. paint.) **12:**258:3a
  portrait of Saint-Simon *illus.* **10:**335
Van Loo, Louis-Michel (Fr. paint.)
  portrait of duc de Choiseul *illus.* **3:**257
van Maanen, Adrian (Am. astron.)
  mismeasure of Milky Way Galaxy **19:**615:1a
van Nelle tobacco factory (bldg., Rotterdam, Neth.)
  design by Brinkman **2:**521:1b
"Van Nu en Straks" (Flem. period.)
  contribution by Cyriel Buysse **2:**691:1b
  development in Flemish literature **2:**60:3a; **14:**726:1a
  publication of the Van Nu en Straks circle **12:**258:3b
Van Nu en Straks circle (lit.) **12:**258:3b
  contribution to Flemish literature **14:**726:1a
"Van oude en nieuwe Christenen" (work by Braak)
  discussed in biography **2:**449:1b
"Van oude menschen, de dingen die voorbijgaan" (work by Couperus): *see* "Old People and the Things That Pass"
van Praagh, Peggy (Austr. ballet dir.)
  contribution to Australian Ballet **1:**715:2b
van Rhign function (astron.)
  galactic star populations **19:**623:1a
van Rijn, Rembrandt Harmenszoon (Du. paint.): *see* Rembrandt Harmenszoon van Rijn
van Rijn, Saskja, *or* Saskja Uylenburgh (Du. heiress)
  influence on Rembrandt **26:**649:1b
Van Risen Burgh, Bernard, II (Fr. cabinetmaker): *see* Risenburgh, Bernard van, II
Van Staudt-Clausen theorem (math.)
  application to Bernoulli numbers **25:**15:1b
van Suchem, Ludolph (Eur. traveller)
  description of Damascus **16:**931:2a
van Swanenburg, Jacob Isaacszoon (Du. paint.)
  association with Rembrandt **26:**646:2b
Van Valkenbough, Peter (Am. art.)
  sketch of Bolton *illus.* **2:**346
Van Vechten, Carl (Am. writ.) **12:**258:3b
Van Vleck, John Hasbrouck (Am. phys.) **12:**259:1a
  formulation of ligand field theory **7:**349:1b
Van Volkenburg, Ellen (Am. puppeteer)
  contribution to puppetry **25:**1035:1b
Van Wagener, Isabella (Am. reformer): *see* Truth, Sojourner
van Welbeck, Johannes (Du. colonialist)
  settlement of Curacao **29:**786:2b
vanadate mineral 12:259:2a
  major ref. in Minerals and Rocks **24:**136:1b
  for a list of related subjects see PROPAEDIA: Section 214
vanadinite (min.) **12:**259:2b
  description **24:**136:1b
  structure and properties *table* **12:**259
vanadium, *or* V (chem. element) **12:**259:3a
  major ref. in Chemical Elements **15:**1011:2a, *tables* 1006
  abundance of the elements *table* **15:**940
  extraction and processing
    carnotite **2:**885:1b
    ore deposits **21:**337:2a
    production of steel alloys **21:**382:2b
  properties
    atomic weight *table* **1:**678
    chemical bonding **24:**295:2a
    geochemical reaction at low temperatures and pressures **24:**150:1a
    isotopes *table* **14:**346
    periodic table of the elements *illus.* **15:**952
  for a list of related subjects see PROPAEDIA: Section 121
vanadocyte (zool. anat.)
  role in pigmentation **16:**589:1b
vanaprastha (Hinduism)
  relationship to ashram **1:**627:2b
Vanbrugh, Sir John (Br. dram. and arch.) **12:**260:1b
  contribution to interior design **17:**33:1a
  precursor to Gothic Revival **13:**1031:1a
  self-taught artist **14:**111:1b
  use of type name **12:**86:2a
Vance, Cyrus (Am. pub. offi.) **12:**260:3a
  views on concept of human rights **20:**718:1a
Vance, Zebulon Baird (N.C. gov. and sen.) **12:**260:3b
Vanchsky range (mts., U.S.S.R.)
  Pamir Mountain area **14:**244:1b
vancomycin (biochem.)
  antibiotic use **17:**519:1a
Vancouver (B.C., Can.) **12:**261:1a
  discovery **15:**544:2b
  location of Vancouver Public Aquarium **12:**262:1a
  physiography and development **15:**484:2b *passim to* 498:2a
Vancouver (Wash., U.S.) **12:**261:2a
  location *map* **29:**158
Vancouver, George (Br. expl.) **12:**261:2b
  history of
    Australia **14:**429:2a
    British Columbia **15:**544:2b
    Hawaii **6:**686:1a
    Vancouver **12:**261:1b
    Vancouver Island **12:**262:1a
    Washington state **12:**508:1b, **29:**458:1a
  sighting of Mount Rainier **9:**907:1a
Vancouver Island (isl., B.C., Can.) **12:**261:3a
  history of British Columbia **15:**544:2b
Vancouver Public Aquarium (aquarium, Vancouver, B.C., Can.) **12:**262:1a
Vancouver Railroad Tunnel (Can.)
  innovations in tunnel construction **26:**447:1b
Vancura, Vladislav (Czech. writ.)
  contribution to Czech literature **16:**903:2b
Vanda (Fin.): *see* Vantaa
Vanda (bot.) **12:**262:1b
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WCEU: *see* World Christian Endeavor Union
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