

# Engineering and Mining Journal

---

## INDEX TO VOLUME CV

---

January 1 to June 30, 1918

---

McGRAW-HILL COMPANY, INC.  
10TH AVE. AT 36TH ST.  
NEW YORK



# ENGINEERING AND MINING JOURNAL

## **INDEX TO VOLUME CV**

January 1 to June 30, 1918

#### **EXPLANATORY NOTE**

Illustrated articles are denoted by an asterisk (\*); book notices by a dagger (†). This index is made comprehensive but concise. Pains are taken to bring together matter belonging to the same subject, so that when a reader looks up an article, he will be cited to related data. Series of simple page numbers, following names of mines or companies, usually refer to news notes. When minor references are numerous, as in the case of "Anacondas," they are sometimes separately designated as "Various notes." With a major entry or series of entries, may be placed several minor ones, relating to the same subject in order that its history may be followed. If the author's name be known, it is the simplest means of reference. Productions are indexed under names of metals and countries or states. The mere juxtaposition of a mineral and geographical name usually signifies an output, but may cover other statistical or news matter. Not all news are indexed but a liberal selection of them is made.

Following is a list of the pages included in the several numbers of the volume, by date:

EXPLANATORY NOTE		Page
Illustrated articles are denoted by an asterisk (*); book notices by a dagger (†).		
This index is made comprehensive but concise. Pains are taken to bring together matter belonging to the same subject, so that when a reader looks up an article, he will be cited to related data. Series of simple page numbers, following names of mines or companies, usually refer to news notes. When major references are numerous, as in the case of "Anaconda," they are sometimes separately designated as "Various notes." With a major entry or series of entries, may be placed several minor ones, relating to the same subject in order that its history may be followed. If the author's name be known, it is the simplest means of reference. Productions are indexed under names of metals and countries or states. The mere juxtaposition of a mineral and geographical name usually signifies an output, but may cover other statistical or news matter. Not all news are indexed but a liberal selection of them is made.		
Following is a list of the pages included in the several numbers of the volume, by date:		
<b>Jan.</b>	<b>Pages</b>	<b>1-44</b>
" 12.	"	45-136
" 19.	"	137-180
" 26.	"	181-224
<b>Feb.</b>	<b>2.</b>	<b>225-268</b>
" 9.	"	269-312
" 16.	"	313-358
" 23.	"	359-402
<b>March</b>	<b>2.</b>	<b>403-450</b>
" 9.	"	451-492
" 16.	"	493-534
" 23.	"	535-578
" 30.	"	579-620
<b>Apr.</b>	<b>6.</b>	<b>621-664</b>
" 13.	"	665-708
" 20.	"	709-774
" 27.	"	775-816
<b>May</b>	<b>4.</b>	<b>817-858</b>
" 11.	"	859-904
" 18.	"	905-945
" 25.	"	946-984
<b>June</b>	<b>1.</b>	<b>985-1028</b>
" 8.	"	1029-1068
" 15.	"	1069-1112
" 22.	"	1113-1152
" 29.	"	1153-1196
<b>A</b>		<b>Page</b>
A. B. C., Mo.		38
Abe Lincoln Cop., Ark.		702
Abrams Land, Okla.		221
Abrasion test, tube-mill pebbles.		1038
Absorption determination		1036
Accidents—Butte & Superior, 1917.		881
—Coal mine fatalities, U. S., 1917.		429
Metal mines, 1916		630
Editorial		653
—Mo.		220
—Mont.		219
—Quebec mines		597, errata 695
—Standardization of reports		1165
Acers, N. F.		818
Acetic-acid oil test		1043
Acid lines, Safety rules need.		188
Ackerman, G.		1022
Acme, Okla.		448
Adam Marsh Molybdenum, Ariz.		854
Adamant block liners.		713
Adams Chrome, Calif.		1063
Adams, H. H. Flotation concentrates, Utah Leg.		*724
—Utah Leg. flotation plant		*535
Adams, J. H.		927
Adams, L. D. died		659
Adams, R. E.		444
Adams, T. S.		688
Adams W. W. Triangulation.		164, errata 560
Anadac, Ont.		448
—Annual meeting		356
Addition agents in flotation		*915
Adirondacks, Gold.		612
—Platinum		612
Admiralty Alaska Gold Mng.		80
Admiralty Zinc Co.		82, 532, 760
Advantageous method of firing drift round.		*1182
Advent of modern mill mechanism to nitrate leaching		987
Adverse factors, Transvaal Mng.		463
Advertisements. Poem		977
Advisory Coun. U. K. Iron ore rept.		*1117
Aeroplanes, Ryan to build.		846
Aetna Iron & Steel, B. C.		1192
Afterthought, Calif.		81, 354, 446, 575, 661,
		810, 813, 937, 1063, 1149, 1182
—Shutdown		221
Agents, Addition, in flotation		*915
Agitators, Brown, Wahhi Gold Mng.		*241
Agnew, T. E.		767
Aqua Santa, Chile.		988
Ahlers, R. O. Valuation of manganese ores.		1164
Ahmeek, Mich.		355, 487, 532, 1064
—Dividends		260, 843
—Production		37, 177, 307, 617, 814, 1026, 1149
Air blasts, Kolar Gold, India.		957
Air-compressor drive		*685
Air-controlled fire-door		*559
Air-hose couplings—Nut and gasket.		*599
Air-lift for handling tailings.		*1177
Air service needs skilled workers		563
Aircraft Board		838, 846, 1182
Ajax, Colo.		532, 1109
Ajax, Id.		37, 399, 813, 1193
Akron, Colo.		981, 1149
Alabama Co., Ala.		940
Alabama Flake Graphite Prod. Assoc.		282
Alabama Graphite Assoc., Import protest		168
Alabama Graphite companies new construction		80
Alabama, Graphite industry		*281, 282, 436
Alabama Graphite vs. Ceylon.		844
Alabama, Labor		854
Aladdin Cobalt, Ont.		488, 900
—Production		264, 942
Alameda Cop., Ore.		942
Alarms, Train		21
Alaska—Chromite deposits		777
—Coal		23
Nenana lands		243
Copper		263, 486, 574, 812, 1024
Frost		338, 587
Alaska-Gastineau Mng.		*922
Mng. costs		1007
Alaska, Gold		521
Copper River dist.		543
Alaska Gold Co. Quarterly report		593
Alaska Gold Mines Co. Annual report		1007
—Production		1108
Alaska Juneau Gold Mng., Alaska		80, 870
—Annual report		1134
Alaska Mines Corp.		109, 870
Alaska, Nickel		28
Alaska, Sideights on.		797
Alaska-Treadwell group		870, 1024
Alaska, Weather conditions		587
Albany, Minn.		447
Alberta, Canada—Water discovery		574
Alcalde Gold, Calif.		1193
Aldrich, S.		76
Alexander, Okla.		1026
Alexandria, Colo.		813
Alexo Nickel, Ont.		488, 942
—Production		222, 284
Algeria, Minerals		1174
Algoma Manganese, Minn.		38, 270
Alice, Colo.		263
Alice, Mont.		1079
Alkalai sulphates in flotation		916
Allen, A. P.		1106
Allen, A. W.		1106, 1146
—Artificial pebbles for tube-milling		*1033
—Tube milling		245
Allen, C. A.		529
Allen, C. F. Business law		*350
Allen, G. L.		718
Allen, R. C.		688
Mineral resources of Mich.		1105
Allen, W. P.		34
Allison Ranch, Calif.		81, 354, 399, 531, 703, 769
Allouez Mng. Co.		82, 398, 487, 858
—Dividends		260, 843
—Production		307, 487, 814, 1026, 1149
Alnutt-Purse, Ark.		1149
Alpha & Exchequer, Nev.		222, 308, 532, 662
Alpha & Omega. See "Dig Gold."		380
Alpha-Lorraine, Iron		809
Alta, Colo.		81, 176, 769, 900
Alta Consol., Utah		140, 178, 356, 448, 576, 662
Alta, Mont.		941, 1150
Alta Tunnel & Transp., Utah		982
Aluminum alloy in Zepplins. Analysis		425
Aluminum alloys, Estimation of manganese.		407
Aluminum Co. of Amer., Americanization work		454
Aluminum, France, price		377
—Ga., deposits		13
—Hungary		498
Aluminum market, 1917.		67
Aluminum, U. S., 1900-1917		567
Price fixed		1051
Salts, 1917		1003
Alums in flotation		916
Amalgamated, Nev.		941
Amalgamated Silver Mines Co., Mont.		177, 814, 856, 941, 1110, 1150
Amalgamated Zinc, Aus.		739
Amalgamation practice, Gold Coast		367
Amargosa, Sink of the.		*985, *1000
Amazon-Dixie, Ida.		307, 855, 1193
Amazon-Manhattan, Ida.		355, 941, 1026
Ambergris, Ida		813
American Car & Foundry Co.		840
America, Central. See "Central."		
America, South. See "South."		
American-Ariz. Ariz.		446
American Assoc. of Engrs.		34, 174, 572, 700, 896
—Boosting the engineer		433
N. Y. Chap.		304
American Assoc. of Petroleum Geologists		572
American Brass Co.		907
American Chamb. Comm., London—U. S.		
trade mark		1091
American Chem. Soc.—Gibbs medal award		700
—Papers, etc.		919, 997
—Spring meeting omitted		424
American Dredging, Calif.		399
American Eagle, Colo.		575
American Eagle, Mo.		900
American Electrochem. Soc.		614, 659, 1022, 1190
—Papers, etc.		163
American Fed. of Labor—Gompers' statement		612
American filter		716, *747
American Gold Dredging, Calif.		1025
American Inst. of Chem. Engrs.		572
American Inst. of Cons. Engrs.		1091
American Inst. of Metals		852, 662
—Papers		1038
American Institute of Mng. Engrs.		937, 978, 1106
—Annual meeting		391
List of papers		239
Report of		426
—Columbia Section		767
—Denver Sect.		305, 811
—Expels enemy aliens		1056
—Fed. income tax report		639
—Manganese price		1175
—Membership requirements		426
—Mont. section		218, 396
—Name change. Editorial		1182
—Tulsa section		700, 767
—Utah section		700, 767
—Washington meeting		1141
American Internat. Steel Corp.		804
American Iron & Steel Inst.		937, 978
—Manganese price schedule		1058
Editorial		1057
—New members		304
—Fig. tin defined		327
—Fig. tin shipments		172
American Locomotive Co.		887
American Metal Co. See also "Chanute"		37, 82, 177, 263, 308, 399, 531, 813, 941, 1193
American Mineral Prod. Co., Wash.		83, *665
American Mng. Congress		937
—Colo. Chapter. Denver meeting		852
—Okla. Chapter		1106
—Utah Chapter		35, 808
Protests Govt. control		262
American peace		842
American propaganda. Editorial		525
American Red Cross. See "Red Cross."		
American Sheet & Tin Plate Co.		795
American Sisters, Colo.		662
American Smg. & Efg.—Annual report		663
Editorial		663
Bunker Hill suit		177, 854
—Dividends, 1917		156
By months		32, 260, 656, 843
—Mexican work, 1917.		67
—Smelting schedules		626
—Smelting investigation, Colo.		542
—Smoke investigations		283
Various notes		59, 81, 142, 308, 812, 898, 1060
American Soc. of Civil Engrs.		1020, 1078, 1150, 1194
American Soc. of Mech. Engrs.		174, 191, 210, 219, 282, 352, 389, 896
Ammonia conservation		191
Ammonia licenses		168
Ammonium molybdate recovery		249
Ammonium nitrate substitute		1126
Amparo, Mex. Dividends		558
Anaconda Copper Mng.—Accident record		381
—Annual report		1005
—Cementation methods		621
Dividends		440, 1073
Ferromanganese plant		677
Ferromanganese production		523
Fireproofing shaft		*1126
Labor commissioner		529, 915
Lexington operations		529
Payroll		355
Production 252, 262, 400, 575, 805, 959, 1101		575
Rhodocrosite concentration		210, 898
Rod and wire plant		219, 898
Safety practices		283
—Various notes		37, 57, 68, 82, 222, 264, 308, 356, 488, 532, 660, 704, 811, 814, 896, 1026, 1078, 1150, 1194
Analysis of bismuth in lead bullion		603
Anchorite Ont.		704
Anderson, A. E.		261
Anderson, G. E. Chinese wolframite		24
Hongkong metal trade		583
Anderson, L. D.		174, 1190
Anderson, R. J.		174, 1190
Ferroalloys in 1917		191
Anderson, S. L.		218
Andes, Calif.		175
Andes Cop. Mng. Chile. Potrerillos mine		175
devel.		137
Andes, Nev.		222, 284, 662
Andesite as tube-mill pebble		1038
Andrews, M.		919
Anemometer		997
Angels Deep, Ariz.		940
Anglo-Amer. riveting contest. See Riveting.		
Ankerite, Ont.		38, 222, 356, 662
Anna Beaver mill, Okla.		733
Anna May, Ark.		899
Annex, Colo.		487
Annual statistical number		46
Anode, Lungless copper.		924
Anthracite. Also see "Coal."		
Anthracite allotments		1097

Page		Page	
Anthracite. Fed. Trade Comm. rept.	776	Austria-Hungary, iron	878
Anthracite stripping	190	Automatic wind-direction recorder	*995
Anti-blacklist law, Ariz.	1107	Avoca-Virginia, Colo.	1149
Antimony, Algeria	1174	Ayer, F., died	767
Antimony, Electrolytic, from stibnite	10		
—In 1917	89		
—New, deposits	797		
—U. S.	646		
Conference	1059	B., C. R. Mng. camp welfare	1131
Should it be fostered?	1088	B. T. C., Repairing cars	1173
Antisell, F. L. Lugless copper anode	*924	Babcock, F.	397
Antoine, Mich.	856	Babilonia Nicaragua	222
Anuario de minería	*350	Bablew Mines, Calif.	354
Apex, Ont.	704	Bachelor, Colo.	1149
Apex water-blast apparatus	*922	Back arching, Timbering	*1070
Arbitrate! Editorial	695	Badger Mng. & Dev'l, Mo.	770, 1193
Arbutnhot roughing tables	732	Baffles, Boiler—Plastic refractory	1049
Arctic Coal Co.	654	Bagley Leasing, Colo.	176, 307
Arcturus, Minn.	1110	—Bald Eagle, Colo.	307
Argall, G. O.	896	Baghouses	97
Argentina—Mining, 1917, reviewed.	125	Bain, H. F.	102, 614, 767
Petroleum	681	—Chinese iron ore	1003
Argo Leasing, Colo.	81	Baker, C. O. Career	1190
Argo Reduct. & Ore Purch., Colo.	219, 263	—Died	1148
—Ore schedule	1107	Baker, I. O. Roads and pavements	*936
Argonaut, Calif.	617, 702, 768	Baker Lead Co., Mo.	474
—Dividends, 1917	159	Baker, M. A.	978
By months	32, 656	Bald Butte, Mont.	204
Arguments over quality	564	Bald Eagle, Colo. See "Bageley."	
Argus, Calif.	855	Bald Mountain Tunnel, Mont.	38
Argus, Cop., Ariz.	1063	Baldwin, H. J., died	351
Ariadne, Colo.	307, 981	Baldwin, H. L.	896
Arizona. Anti-Blacklist law	1107	Baldwin Locomotive Works	887
Arizona-Binghamton Cop., Ariz.	36, 702, 855, 1114	Ball-milling theory and practice	*669
Arizona-Calif., Ariz.	1108	Ball-mills, Chalmers & Williams	*713
Arizona Comm., Ariz.	306, 702	Ballantyne, C. G.	304, 950
Arizona Cop. Co., Ltd—Annual report	1098	Ballister, H. D.	994
—Dividends	280, 848	Ballold, Prof. German national wealth	1058
Arizona Cop. Co., Ltd—Annual report	1098	Baltimore, Calif.	354
—Dividends	656, 1018	Bancroft, H. H.	654
—Production	220, 252, 806, 812, 959, 1101	Bangor Valley, N. L.	917
—Various notes	176, 354, 531, 718, 769, 1024	Bangor, Minn.	941
Arizona, Copper, 1917 review	58	Bankers Lead & Zinc, Okla.	400
Arizona-European, Ariz.	855	Bankers Trust Co., Liberty loan	834
Arizona, Flotation practice	717	“Banket”	106
Arizona-Hercules, Ariz.	398, 446	Bannack, M. & M., Mont.	662, 1194
—Mill construction	*876	Banner Gold Mng. & Mfg., Ariz.	221
—Photos	*680	Banner Mng., Ariz.	1063
Arizona, Labor	1107, 1147	Barabee, C. A.	854
—Law	530	Barber-Green bucket loader	*473
—Manganese	1191	Barcellos Corporation, Brazil	1140
Arizona Middlemarch Cop., Ariz.	80	Barium sulphate precipitation	958
Arizona, Minerals, prod. 1917	358	Barker, E. E.	704
Arizona Mossback, Ariz.	898, 1024, 1108, 1149	Barnes-King Devel., Mont.	264, 308, 532,
Arizona Ore Reduction Co.	80, 1063	—Annual meeting	575
Arizona, Petroleum	530	—Annual report	1180
Arizona-Portland, Ariz.	855	—Dividends	440, 1019
Arizona, Potash	176	—Production	856
Arizona Power Co.	220	Barnett Mng. Co.	1147
—Description of plant	1113	Barneveld, Van (See "Van Barneveld")	
Arizona-Va. Cop., Ariz.	812, 940	Barr, C. J.	1106
Arizona, Workmen's compensation	1147	Barr, W. M. Firebrick melting points	22
Arkansas & Ariz. Cop.	1114	Barriers, Construction data	1174
Arkansas, Manganese district	996, *1128	Barrier Roasting, N. S. W.	532
Arkansas-Oklahoma, Ark.	981	Barrier South, Aus.	661
Arkansas Phosphate, Ark.	981	Barron, C. W. Taxation	1096
Arkansas Zinc and lead field	1917 prod.	Barrows, W. A., Jr.	304
Armor plates, Zirconium steel in	306	Barry, B. Advertisements	977
Armour, J. A.	1079	Barstow, Colo.	27, 703
Armour Mng., Ariz.	940	Bartlett Tunnel, Colo.	855, 941
Arms, C. S.	940	Baruch, B. M.	517, 1145
Armsby, G.	304	—Editorial on his administration	524
Armstead Mines, Id.	21, 263, 355, 447, 661, 941	—Mines control	656
Army Appropriation Bill	891	Bassalt as tube-mill pebble	1039
Army mental tests	254	Base-metal mng. as investment	430
Arpa, Calif.	575	Bastin, E. S.	1022
Ardale, See Van Ardsdale		Bates, G. M. Safety rules need for acid lines	188
Arsenic, U. S.	382	Batesville, Ark., manganese	966, 1148
—1917 review	92	Batesville Gas & Oil, Ark.	306
Arthur Mng. Co.	74	Battelle, J. G., died	1022
Artificial pebbles for tube-milling	*1033	Battle, J. R. Lubricating engineers handbook	1105
Artillery officers wanted	673	Battlefield metal salvage	380, 476, 654
Asbestos, Canada, 1917	590	Batten, C. E.	940
—Gt. Britain	371	Bauxite—Ga., Coastal plain	13
Needs	702	—France	156
—1917 reviewed	132	Beacon, Ont.	974
Ash, C. E.	767	Beam, T. W.	768
Ash Iron Co., Minn.	355	Bear Hill, Ark.	*329
Ashby Manganese, Colo.	899	Bear Lake Pool, Mich.	177, 263, 355, 399, 532
Ashcroft, E. A. Potash extraction	382	Bear Top, Id.	770, 1193
Ashley, G. H. Cannel coal	766	Beaty, J. A.	937
Aspen, Colo.	176	Beaver & Belfast, Colo.	703, 855
Assay Commission, Members	390	Beaver, C. W.	597
Assay terms, Chilean	162	Beaver, Ont.	36, 448, 488, 856
Assaying methods, Standardization	1024	—Production	942, 1110
Assessment work, Calif., exemption	35	Bedford, A. C.	1190
—Ont.	1062	Beebe, Calif.	81
—Sufficiency	630	Beebe, H. C.	894
—Soldiers' protection	616	Beehive, Ariz.	1108
Associated Goldfields, Ont.	618, 982, 1110	Beer, Sonheimer & Co.	843
Associated Lead & Zinc, Mo.	662	Behr, H. C.	992
Associated Lead, Aus.	939	Behrman, A. S. Safety pipette	*249
Associated Zinc Ore Prod. Assoc.	262	Belding, Wash.	397
Association of Iron & Steel Elect. Engrs.	896	Belt, C. C., died	572
Association of Ohio Tech. Soc.	396	Bell, M. L. Silica brick	342
Association of the 27th Engrs. See "Twenty-seventh."		Bell, R. N. Mining in Id.	145, 1768
Athletic Mng. & Smg.	68, *730	Bella Union, Ariz.	1024
Atlanta Mines, Nev.	982, 1064	Bellboy, Mont.	704, 814, 941
Atolia Mng Co., Workmen's compensation case	373	Bellerophon, Utah	264
Atolia Tungsten, Calif.	81	Belmont Shawmut Mng., Calif.	855
Attaching fuse to primers	*1133	Belmont-Surf Inlet, flotation	*720
Auger, C. L.	930	Belmont-Wagner, Colo.	487, 1109, 1193
August Mng. Co., Mont.	38	Belt, computing length	*383
Augustus, A. A.	919	Belt guards, Removable	*164
Aurora, Okla.	1150	Bemis ventilation tubes	*337
Australia—Copper, costs	131	Ben B. Mng., Mo.	82, 355
Production	131	Bender Metals & Milling, Wash.	529
Selling	952	Bendigo Amal., Aus.	661
—German controlled mines	1096	Bendigo goldfield, Aus.—1917 review	306
—Iron ore deposits	1119	Benedene, Okla.	448
—Selective flotation	739		
—Zinc	938		
—Zinc concentrates	1013, 1024		
Bennett, Minn.	221, 662, 770, 1110	Bessemer Iron Co., Minn.	177
Bent, G. B.	810	Bessemer Soll Pipe Co.	354
Benton Ranch, Calif.	1063	Best & Belcher, Calif.	1030
Bergen, R. C.	767	Bethlehem Zinc, Okla.	532, 1064
Berry, E. S.	261	Betsom Plastic Fire Brick Co.	1049
Berry flexible joint	*472	Big Ben, Kan.	221
Bessemer Iron Co., Minn.	177	Big Chief, Okla.	939
Benton Ranch, Calif.	1063	Big Creek Lsg., Ida.	941
Bethlehem Zinc, Okla.	532, 1064	—Dividends, 1917	159
Betsom Plastic Fire Brick Co.	1049	By month	32
Big Creek, Mng., Ida.	355, 487, 770	Big Creek, Mng., Ida.	263
Big Dyke, Calif.	263	Big Elk, Okla.	982
Big Eight, Okla.	900	Big Five, Colo.	176, 355
Big Four, Colo.	899	Big Four, Colo.	399
Big Four Explor., Utah	897	Big Horn Basin, Wyo., Petroleum	23
Big Hurricane, Ark.	813	Big Indian Cop., Utah	83
Big Jim Consol. Mng., Ariz.	854, 898, 940, 1108	Big Lead, Kan.	1026
Big Ledge Devel., Ariz.	220, 812, 1114	Big Ledge, Ariz.	852
Big Oak, Calif.	769	Big Pine Consol., Ariz.	661
Big Pine Mng., Ariz.	1108, 1114	Big Pine, Nev.	1110
Big Shot, Colo.	1064	Big Toad Gold Mng. & Mfg., Colo.	447, 1109
Big Toad Gold Mng. & Mfg., Colo.	447, 1109	Bigelow, B., died	852
Billharz, Kan.	82, 618	Bilikens, Okla.	448
Billingsey, P.	1073	Billingsley, P.	222
Binders	*1132	Binding timbers to truck	
Binham Mines, Utah		Bindham Mines, Utah	
Binoculars wanted	1010	Binders	
Birchville Consol., Calif.	1109	Binders wanted	
Birdseye, H. U.	444	Binduminous schists in Uruguay	828
Birmingham Clay Products Co., Ala.	36	Binduminous schists in Uruguay	828
Birmingham Metal. Soc.	1022	Björkasaens mines, Norway	201
Birmingham Mng., Colo.	263, 447	Black Bear, Colo.	817, 703, 1109, 1193
Birmingham Trussville Iron, Ala.	80	Black Chief, Mont.	1078
Birney, Calif.	486	Black Diamond, Ariz.	982
Bisbee, Ariz.—Prominent citizens arrested	980	Black Eagle, Okla.	812, 1024
—Deportations misunderstood	1055	Black Giant, Ariz.	1012
Bishop Knoll, Ariz.	769	Black metal, Colo.	447
Bismarck, S. D.	900, 1150	Black metals, Nev.	941
Bismuth analysis in lead bullion	603	Black Mountain Mine, N. Y.	83
—Colorimetric determination	882	Black Oak, Calif.	703, 768
Gt. Br.	1083	Black Reef Cop., Ariz.	486
—U. S., 1917 review	134	Black Rock, Mont.	1079
Bits—Carr v. cross	185	Blackner, H. M.	1107
Bituminous. See also "Coal."		Blair, A. A. Chemical analysis of iron	†1105
Bituminous schists in Uruguay	828	Blair furnaces, New, U. S.	925
Björkasaens mines, Norway	201	Blasting—Advantageous method of firing drift round	*1132
Black Bear, Colo.	817, 703, 1109, 1193	—Attaching fuse to primers	*1133
Black Chief, Mont.	1078	Injury to employees	327
Black Diamond, Ariz.	982	Open cut	365, 601, 1130
Black Eagle, Okla.	812, 1024	Powder, Perseverance, Alaska	*922
Black Giant, Ariz.	1012	Primers, safety	*290
Black metal, Colo.	447	Blasts, Air, Kolar, India	957
Black metals, Nev.	941	Blewett, Wis.	488
Black Oak, Calif.	83	Bliss, W. A.	899
Black Rock, Mont.	1079	Bloomer Hill, Calif.	813
Blackner, H. M.	1107	Blow, A. A. Career	*152
Blair, A. A. Chemical analysis of iron	†1105	—Color school tribute	216
Blair furnaces, New, U. S.	925	—Death	34
Blasting—Advantageous method of firing drift round	*1132	Blow, G.	261
—Attaching fuse to primers	*1133	Blue Bell, Ariz.	354, 398
Injury to employees	327	—Bonus system	461
Open cut	365, 601, 1130	Blue Bell Exten., Ariz.	398
Powder, Perseverance, Alaska	*922	Blue Bonnet, Okla.	618
Primers, safety	*290	Blue Bull, Nev.	982
Blasts, Air, Kolar, India	957	Blue Eagle Mine, Ariz.	702
Blewett, Wis.	488	Blue Grass Phosphate, Tenn.	*285
Bliss, W. A.	899	Blue Jay, Colo.	1025
Bloomer Hill, Calif.	813	Blue Jeans, Calif.	703
Blow, A. A. Career	*152	Blue Head, S. D.	704
—Color school tribute	216	Blue Ledge, Calif.	399
—Death	34	Blue Ledge, Ore.	1150
Blow, G.	261	Blue Monster Cop., Ariz.	1063
Blue Bell, Ariz.	354, 398	Blue River, Colo.	1193
Blue Tent, Calif.	221	Blue Tent, Calif.	221
Bluebell, B. O.	1064	Blueprint holder	*336
Bohlander, J.	1165	Bohlander, J.	1165
Bohn, Colo.	813	Bohne, G. H.	1165
Boiling point of metals	425	Bolinas Cop., Calif.	981
Boileo, Compagnie du. Production	252	Bolin, G. H.	1165
Boilermaking	308, 618, 806, 856, 959, 1064, 1101	Bolivia, Mining, 1917 review.	
Boiling		—Marketing	1014
Tent, Calif.		Refining in Chile	874
Bluebell, B. O.		Bolshevik smelterman's diary	468
Blueprint holder		Bonomanza, Colo.	617, 703
Bohlander, J.		Bonds, N. Y. Exchange	86

Page	Page	Page	
Bonne Terre, Mo. . . . .	1157	Building-construction data . . . . .	1174
—Ventilation . . . . .	1159	Building, U. S., 1917 . . . . .	399
Bonney, N. M. . . . .	264	Building, Unnecessary, banned . . . . .	388
Bonus system . . . . .	461	Bulah, E. Mo. . . . .	939
—Editorial . . . . .	525	Bulkeley Wells, Colo. . . . .	855
Boo-Gra-Loo Mng., Okla. . . . .	1108	Bully Hill, Calif. . . . .	37, 221, 375, 661, 813, 1025, 1149
Boosting the engineer . . . . .	433	Bumbarger, Va. . . . .	*418
Bope, H. P. . . . .	614	Bumblebee, Calif. . . . .	307
Bor. Soc. de Mines de Serbia . . . . .	470	Bunker Hill & Sullivan. . . . .	
Borate, Calif. . . . .	529	—Amer. S. & R. suit . . . . .	177, 554
Borax, Calif., deposits . . . . .	*985, 1000	—Flotation machine . . . . .	710
Borax, Consol. Annual report . . . . .	1127	—Milling practice . . . . .	713
Boronite copper . . . . .	206	—Various notes . . . . .	64, 84, 938
Borst, C. A., died . . . . .	351	Bunker Hill, Ariz. . . . .	768, 769, 812
Bosphorus tunnel . . . . .	434	Bunker Hill, Colo. . . . .	220, 769
Boss, Nev. . . . .	618	Bunker Hill, Kan. . . . .	487
—Dividends . . . . .	34, 1917	Burch, A. W. . . . .	38
By months . . . . .	32, 440	Burch, H. K. . . . .	396, 1139
Boston & Mont. Devel. . . . .	82, 662, 812, 979, 1194	Burch, L. . . . .	717, 810
Boston-Elm Co., Mo. . . . .	68	Burchard, E. F. . . . .	1147
Boston-Emerald N. M. . . . .	576	Bureau of Mines . . . . .	757, 979, 1012
Boatwick, W. A. . . . .	31, 761	—Accidents, 1916 . . . . .	630
Boulder Canyon, Colo. . . . .	1193	—Activities . . . . .	543
Bourkes Mines, Ont. . . . .	84	—Annual report . . . . .	768
Bourne vs. Fed. Mng. & Smg. . . . .	273	—Caron process tests . . . . .	565
Bourquin decision reversal, Editorial . . . . .	934	—Chalcocite flotation . . . . .	422
Bow Island, Alta. . . . .	1098	—Coal conservation . . . . .	26
Bowers, P. C. . . . .	810	—Co-operative rescue work . . . . .	252
Bownocker, J. A. Coal fields of U. S. . . . .	*936	—Co-ordinate metal mng. work . . . . .	256
Box, concentrates . . . . .	*294	—Disposal of exhaust gases in mines . . . . .	633
Boy Scouts . . . . .	798	—Electromagnetic separator . . . . .	803
Boyd, J. A. . . . .	810	—Explosives act . . . . .	378, 1022
Boyd, W. S. . . . .	444	—Gasoline safety rules . . . . .	610
Boyer, P. . . . .	761	—Gibbs rescue apparatus . . . . .	*223
Boyle, J. W. . . . .	34	—Liberty loan . . . . .	974
Brabrook, G. H. . . . .	485	—Lignite investigation . . . . .	24
Braden Cop. Corp. . . . .	171	—Manganese exper. . . . .	256
—Production . . . . .	252, 806, 959, 1101	—Oxidized ore flotation . . . . .	718
Bradford, L. . . . .	739	—Proposed transfer . . . . .	701
Bradley, W. W. Calif. mineral prod. . . . .	*350	—Quicksilver research . . . . .	520
Bradshaw Reduct. Co., Ariz. . . . .	80, 1114	—Salt making in U. S. . . . .	*1936
Brakpan mines, South Af. . . . .	129	—Selective flotation exper. . . . .	768
Brailey, B. Old miner. . . . .	*169	—Smelter smoke investigations . . . . .	253
The slogan . . . . .	507	—Standardization of accident reports . . . . .	1165
Branch-raise sub-level caving, Ruth, Nev. . . . .	*503	—Technical men needed . . . . .	888
Brandy City Hydraulic, Calif. . . . .	703	—War work budget . . . . .	477
Brant, Calif. . . . .	899	—Yearbook . . . . .	*350
Brass, Technical analysis . . . . .	*527	Bureau of Standards. See "Standards." . . . . .	
Brassert, H. A. . . . .	528, 767	Burke, Ida. . . . .	*727
Bray, Minn. . . . .	355, 662, 1110	Burnett, F. H. . . . .	971
Brazil—Iron ore deposits . . . . .	1123	Burns, J. T. . . . .	1106
Iron situation . . . . .	1002	Burns-Moore, Colo. . . . .	37
Manganese . . . . .	845, 1140	Burnside, Ont. . . . .	308, 448, 704, 1028
Imports and exports . . . . .	28	Burrage, A. C., vs. L. Ross . . . . .	1185
Piracaua deposits . . . . .	479	Burton, G. E. . . . .	1022
Mica exports . . . . .	878	Burton, G. W. . . . .	700, 1106
Mining, 1917 review . . . . .	125	Business favors trade war . . . . .	474
Brett, M. L. . . . .	930	"But the Engineers" . . . . .	793
Bricks, Refractory . . . . .	954	Butchart table covering . . . . .	207
Silica, mfr . . . . .	194	Butler Bros., Minn. . . . .	308
Brigham, A. F. . . . .	700, 852	—Shenango Suit . . . . .	221
Brinson-Kirtley, Okla. . . . .	1026	Butler, G. M. . . . .	1190
Briquetting vs. flotation . . . . .	1176	Butte & Pentus, Mont. . . . .	618
Briquetting zinc charge . . . . .	*370, 883, 1174, 1176	Butte & Superior Mng. . . . .	
Brissenden, P. A. Investigates rustling cards . . . . .	445	—Accidents, 1917 . . . . .	881
Bristol-May, Nev. . . . .	941	—Annual report . . . . .	1005
Briston Mng., Mich. . . . .	856	Elm Orlu litigation . . . . .	488, 701
Britain plans post-war trade . . . . .	755	—Flotation Litigation . . . . .	99, 397, 609, 938, 1141
British Aluminum Co. . . . .	71	Editorial . . . . .	934
British Amer. Nickel Corp. . . . .	84, 661, 814, 982, 1026, 1087	U. S. Ct. of Appeals decision . . . . .	962, 974
—Subsidized . . . . .	178	Editorial . . . . .	974
British Columbia, Copper . . . . .	1106	—Production . . . . .	400, 488, 578, 704
Iron bounties act . . . . .	939, 985	—Quarterly report . . . . .	799
Labor . . . . .	939	—Various Notes . . . . .	178, 895, 900, 1194
Law . . . . .	702, 854, 939	Butte Consol. G. & S., Calif. . . . .	531, 1025
Mineral prod. 1917 . . . . .	318, 353, 1100	Butte Cop. & Zinc, Mont. . . . .	618, 662, 900
Taxation . . . . .	812, 939	Butte Cop. Czar, Mont. . . . .	660, 662, 900
Brockunier, C. R. Mng.-camp welfare. . . . .	798	Butte-Detroit, Mont. . . . .	178, 308, 811
Brockunier, S. H. . . . .	261, 896	—Ophir devel. . . . .	529
Crowning a wooden pulley . . . . .	431	—Re-opened . . . . .	305
Dietary for miners . . . . .	627, 883, 1090	Butte district, 1917 review . . . . .	57
Broken Hill mines, Aus. . . . .	486	Butte-Kansas Mng., Mo. . . . .	353, 814
Broken Hill Prop., Aus. . . . .	739	—Destruction by fire . . . . .	56
—Annual report . . . . .	1180	Butte Main Range, Mont. . . . .	900
Broken Hill So. Silver Mng., Aus. . . . .	739	Butte Metal Trades Council . . . . .	573
Semi-annual report . . . . .	250	Butte, Mont., Labor. See "Montana." . . . . .	
Broken Hills, Ariz. . . . .	36, 354, 486, 940	Manganese. Description of ores . . . . .	1076
Brokers, Chrome, Calif. . . . .	967	—Production . . . . .	397
Bromine, U. S., 1917 . . . . .	537	Butterfly, Colo. . . . .	941
Bronson, B. . . . .	26	Butters Salvador Mines . . . . .	922
Brookerson, D. J. . . . .	899	Buying monopoly . . . . .	801
Brooks, G. G. . . . .	1061	Buzzell, J. W. Cementation . . . . .	585
Brooks Hill, Ark. . . . .	263, 1129	Bwana M'Kubwa Cop. Mng. Co. . . . .	23
Brooks Oil, Calif. . . . .	1063	Bybee, Nev. . . . .	457
Broome Co., Ariz. . . . .	1108	Byers, A. M. Co. Pipe corrosion . . . . .	287
Brother, G. H. Filtration . . . . .	837	Cabinet, Foreign trade Sec. . . . .	887
Brown, A. H. . . . .	1190	Cable rates, So. Amer. . . . .	211
Brown, F. C. Tube milling . . . . .	245	Caprillas mine, Mex.—Triangulation . . . . .	164
Brown, G. W. . . . .	818	Cafeteria, Kerr, Ia. . . . .	*946
Brown, H. L. Molybdenum mng., Colo. . . . .	*905, 920	Cageway covers . . . . .	*1047
Brown Hoisting Mach. Co. . . . .	597	Caging, Simplified with heavy mine cars . . . . .	*559
Brown, L. L. . . . .	1108	Calaveras Consol., Calif. . . . .	81, 768
Brown, J. B. . . . .	887	Calcium chlor. prevents freezing . . . . .	247
Brown, R. G. . . . .	1078	Calcium sulphate in flotation . . . . .	916
Brown, T. R. . . . .	1008	Calculations of a German professor. Edit. oral . . . . .	1058
Browne, L. E. R. R. electrification . . . . .	646	Caldwell, A. died . . . . .	659
Browning, A. J., died . . . . .	598	Caldwell, F. C. F. . . . .	938
Bruhl, F. T. Amalgamation practice, Gold Coast . . . . .	367	Caledonia, Colo. . . . .	941
Cyaniding graphitic ores . . . . .	197	—Annual report . . . . .	616, 800
Brunker, A. . . . .	927	—Dividends, 1917 . . . . .	158
Brunton, D. W. . . . .	930, 978	By months, . . . . .	32, 260, 440, 656, 843, 1019
Brush, E. Silver in 1917 . . . . .	45	Caliche deposit, Calif. . . . .	28
Bryce, R. A. . . . .	767	California Alkali, Calif. . . . .	81, 1061
Bucket-elevators—Use with concentrates . . . . .	725	California—Borax deposits . . . . .	*985, *1000
Bucket loader, Self-feeding . . . . .	*473	—Caliche deposit . . . . .	28
Buckshot Mng., Okla. . . . .	1194	—Chrome. 305, 564, 574, 660, 938, 940, 981, 1023, 1063, 1109, 1149	
Buffalo Hunter Mng. & Mfg., Colo. . . . .	1025	Specifications and producers . . . . .	420
Buffalo, Okla. . . . .	221, 447	California Chrome Co. . . . .	564
Buffalo, Ont. . . . .	488, 814, 900, 1087	California Comstock, Utah . . . . .	178
—Flotation . . . . .	785	—Bought by Silver King Con. . . . .	264
—Production . . . . .	264, 942, 1110		
California—Conference of oil men . . . . .	485	California—Gas, Natural, 1917 . . . . .	1142
—Gold . . . . .	305, 768	—Labor . . . . .	807, 1104
Manganese . . . . .	305, 940, 979	—Manganese . . . . .	305, 940, 979
Meteorological conditions . . . . .	485	—Naval reserve lands . . . . .	35
California mine, Calif. . . . .	307	—New maps . . . . .	573
California—Mng. situation . . . . .	811	—1917 production . . . . .	1142
Mng. statistics, 1916 . . . . .	219	—Potash . . . . .	*985, *1000
California Nat. Gold Mng. . . . .	80	California Slimes Concentrating Co. . . . .	80
California—Nitrate, Death Valley . . . . .	813	California State Min. Bur. . . . .	1061, 1936
California—Oregon Power . . . . .	399	California Trona, Co. vs. U. S. . . . .	907
California—Petroleum, 175, 445, 573, 615, 660, 701, 853, 897, 938, 979, 1061		California, Tungsten deposits . . . . .	263
Naval reserves lands . . . . .	35	California, Wage schedule, Oil fields . . . . .	796
New maps . . . . .	573	Water supply . . . . .	1147
1917 production . . . . .	1142	Calitan, Mo. . . . .	38
—Quicksilver, 1917 review . . . . .	52	Callahan, J. F. . . . .	614, 617
California State Min. Bur. . . . .	1061, 1936	Calliope, Colo. . . . .	487
California Trona, Co. vs. U. S. . . . .	907	Callister, E. died . . . . .	261
California, Tungsten deposits . . . . .	263	Callow, J. M. . . . .	718
California, Wage schedule, Oil fields . . . . .	796	Callow pneumatic cells . . . . .	*708, 710, 717
Water supply . . . . .	1147	—Bottom pans . . . . .	*754
Calumet & Hecla Mng. Co. . . . .	880	Calumet & Ariz. Mng. Co. . . . .	80, 306, 880
—Annual report . . . . .	885	—Dividends, 1917 . . . . .	159
By months . . . . .	32, 656	By months . . . . .	32, 656
—Production . . . . .	854, 981, 1149	—Haulage . . . . .	353
Calumet & Hecla Mng. Co.: . . . . .		—Labor . . . . .	353
—Annual report . . . . .	1093	—Production . . . . .	252, 263, 307, 487, 575, 806, 814, 859, 1026, 1101, 1149
Death of T. L. Livermore . . . . .	*234	—Tax appeal . . . . .	898
Dividends, 1917 . . . . .	159	Canada Dept. of Mines rept. . . . .	1766
By months . . . . .	32, 656	Canada, Gas, natural . . . . .	1099
Haulage . . . . .	353	—Gold . . . . .	588
Labor . . . . .	353	Ore deposits . . . . .	1118
Production . . . . .	252, 263, 307, 487, 575, 806, 814, 859, 1026, 1101	Steel . . . . .	688, 1062
Tax appeal . . . . .	898	—Lead . . . . .	513, 768
Canada Dept. of Mines rept. . . . .	1766	—Magnesite . . . . .	589
Canada, Gas, natural . . . . .	1099	—Mineral production, 1917 . . . . .	513, 588
—Gold . . . . .	588	—Mining accidents . . . . .	697
Iron, 1917 . . . . .	590	—Molybdenum . . . . .	530
Ore deposits . . . . .	1118	1917 production . . . . .	591
Steel . . . . .	688, 1062	Nickel deposits . . . . .	1125
—Lead, 1917 . . . . .	589	1917 production . . . . .	589
Magnesite . . . . .	589	Peat . . . . .	1108
—Mineral production, 1917 . . . . .	513, 588	Petroleum fields . . . . .	1099
—Mining accidents . . . . .	697	Silver, 1917 . . . . .	589
Molybdenum . . . . .	530	Zinc bounty . . . . .	1108
1917 production . . . . .	591	1917 production . . . . .	590
Nickel deposits . . . . .	1125	Canadian Electro-Products Co. . . . .	441
1917 production . . . . .	589	Canadian Kirkland, Ont. . . . .	488, 576, 770, 982
Peat . . . . .	1108	Canadian Klondike Mng. Co. . . . .	109
Petroleum fields . . . . .	1099	Canadian Mng. Inst. . . . .	572, 852, 1060
Silver, 1917 . . . . .	589	—Annual meeting . . . . .	513, 1146
Zinc bounty . . . . .	1108	Officers . . . . .	528
1917 production . . . . .	590	Canadian Nat. Clay Prod. Assoc. . . . .	441
Canadian Electro-Products Co. . . . .	441	Canadian Soc. of Civil Engrs. . . . .	596
Canadian Kirkland, Ont. . . . .	488, 576, 770, 982	Cananeara. See "Greene-Cananeara."	
Canadian Klondike Mng. Co. . . . .	109	Candelaria, Nev. . . . .	1194
Canadian Mng. Inst. . . . .	572, 852, 1060	Cane Springs, Ark. . . . .	176
—Annual meeting . . . . .	513, 1146	Cannon, J. D. . . . .	930
Officers . . . . .	528	Cantonment contracts . . . . .	519
Canadian Soc. of Civil Engrs. . . . .	596	Canvas tubing for mine ventilation . . . . .	325, *328, *336
Cananeara. See "Greene-Cananeara."		Cape Copper Co., annual report . . . . .	900
Candelaria, Nev. . . . .	1194	—Production . . . . .	906
Cane Springs, Ark. . . . .	176	Capital Co., Cole. . . . .	355
Cannon, J. D. . . . .	930	Capital Issues Comm. . . . .	887
Cantonment contracts . . . . .	519	Capron, W. C. . . . .	700
Canvas tubing for mine ventilation . . . . .	325, *328, *336	Car dumping device . . . . .	*600
Cape Copper Co., annual report . . . . .	900	Car lifter . . . . .	*247

Page	Page
Caron process tests . . . . .	565
Carothers, J. M. Electric phosphate mng. . . . .	879
Carpenter, H. C. H. . . . .	937
Carr bits. See "Bits." . . . . .	
Carrell, H. G. . . . .	927
Carruthers, Colo. . . . .	177, 399, 447, 900, 1109
Carson Hill Gold Mines, Calif. . . . .	529
Carson, Sir J. W. . . . .	852
Carter, J. G. . . . .	907
Cartwright, J. H. . . . .	810, 896
"Cascade" flotation. See "Flotation." . . . . .	
Casey Cobalt Silver Mng., Ont. . . . .	84, 704
Cash Boy, Nev. Production 488, 618, 662, 900, 943	
Cashier Gold Mng., Colo. . . . .	355, 531
Cassiterite, Va. . . . .	5
Casson, W. E. . . . .	767
Castle Butte Mine, Ariz. . . . .	940
Castle Mng., Ont. . . . .	229
Catastrophe, Colo. . . . .	703
Catchings, W. . . . .	896
—On Administration . . . . .	760
Catherine, Ariz. . . . .	855
Cathodes, Gold . . . . .	162
Catlin, R. M. . . . .	1022
Caved stopes. Recovery in narrow veins . . . . .	*1069, 1103
Caving. See also "Mining methods." . . . . .	
—Ruth mine, Nev. . . . .	*503
Cement, Copper amalgam . . . . .	780
Cement dust as potash source . . . . .	596
Cement gun in mng. . . . .	*584, *623
Cement gun in the Coeur d'Alene . . . . .	*787
Cement, U. S. production . . . . .	172
Cementation process . . . . .	*584, *623, *787
—Fire proofing mine shaft . . . . .	*1126
—Ill. oil field . . . . .	*1080
Ceniza mill . . . . .	1033
Centennial-Eureka, Utah . . . . .	942, 1194
Centennial, Mich. . . . .	447, 532
—Production . . . . .	487, 814, 1026, 1149
Central Ala. C. & I. Co. . . . .	1063
Central America—Hotel accommodations . . . . .	571
—Mining, 1917, review . . . . .	122
Central Coal & Iron, Ala. . . . .	80
Central Eureka, Calif. . . . .	307, 446, 574, 617,
	768, 1025, 1108
Central Hill, Utah . . . . .	356
Centralize railway purchases . . . . .	561
Centre Star, B. C. . . . .	1090
Century, Okla. . . . .	1194
Cervat, Ariz. . . . .	661
Cerise Gold Mng., Calif. . . . .	80
Cerium, U. S. 1917 review . . . . .	134
Cerro de Pasco . . . . .	488
—Production 222, 252, 400, 576, 806, 814,	
	559, 982, 1101
—Dividends, 1917 . . . . .	161
By months . . . . .	32, 656
Cerro Gordo, Calif. . . . .	769
—Dividends . . . . .	260
Ceylon Graphite, Ala. . . . .	281
Ceylon, Graphite, export . . . . .	327
—Plumbago . . . . .	752
Ceylon vs. Alabama graphite . . . . .	844
“Changrip” pipe vise . . . . .	*684
Chalocite leaching . . . . .	552
Chalcopyrite flotation, So. Ore. . . . .	422
Chalcopyrite-pyrrhotite ores—Chalcopyrite flotation . . . . .	422
Chalmers & Williams ball-mill *713 (errata) . . . . .	935
Chamberlain, C. . . . .	1106
Chamberlain Ore Sampling, Colo. . . . .	769
Chamberlain, P. F. . . . .	1060
—Labor co-operation scheme . . . . .	1166
Chambers, A. A. Mineral Springs, Alaska . . . . .	1936
Chambers-Ferland, Ont. . . . .	532, 576
—Dividends . . . . .	356
Champion, Calif. . . . .	81, 531
Champion, Colo. . . . .	813
Champion, Mich., Dividends . . . . .	260
Champion, Mont. . . . .	222
Champion Reed Gold Mng., So. Africa . . . . .	914
Chance, T. M. Heavier than water flotation . . . . .	427
Change house, Cop. Queen Consol., Bisbee . . . . .	*20
Changes in economic policy. Editorial . . . . .	933
Channing, J. P. See also “Gold Mng.” . . . . .	
—Fed. income tax report . . . . .	639
Channing, R. H., Jr. photo . . . . .	786
Chanute Speiser, Kan. . . . .	308, 768, 941
Chapman, T. . . . .	1191
Charcoal in gold precipitation . . . . .	506
Charles M. Dobson Co. . . . .	190
Charlton, H. W. Potash from greensand . . . . .	919
Chart, Pipe diameter determination . . . . .	*684
Chart, Spacing, shaft hangars . . . . .	473
Chase, R. L. Colo. mng. and geol. map . . . . .	498
Chemical Alliance . . . . .	444
Chemical French . . . . .	1105
Chemical glassware compared . . . . .	248
Chemical laboratory—U. S. Metals Rtg. . . . .	*461
Chemical Met. & Mng. Soc. of So. Africa . . . . .	932
Chemical service section . . . . .	255
Chemicals, Flotation . . . . .	712, 797, 916
Chemicals, France, Mfr. . . . .	324
Chemistry in war . . . . .	348
Chemists' Club, N. Y. . . . .	700, 1106
Chemists in National Army . . . . .	755
—Deferred classification . . . . .	548
Cheradame, A., on Lloyd George . . . . .	760
Cherokee, Mich. . . . .	177, 770
Chert as tube-mill pebble . . . . .	1030
Chestates Pyrites & Chem., Ga. . . . .	447
Chief Consol. Corp., Utah 141, 448, 576, 662,	
	856, 1064, 1150, 1194
—Annual report . . . . .	799
—Dividends . . . . .	440, 1019
Childs power plant. See “Ariz. Power.” . . . . .	
Chile Copper Co. . . . .	
—Production . . . . .	252
Ross vs. Burrage . . . . .	1185
Chile, Cop. Production . . . . .	856, 959, 1101
Chile Explor. Co. . . . .	171
—Production . . . . .	576
Chile—Mining, 1917 review . . . . .	123
—Nitrate . . . . .	889
—Petroleum swindle . . . . .	526
—Potash . . . . .	1003
Deposits, Plintados Salar	
Extraction . . . . .	674
Chilean assay terms . . . . .	162
China—Iron deposits . . . . .	1003
—Metal trade . . . . .	583
—Silver . . . . .	1108
—Tin, 1917 . . . . .	658
—Wolframite . . . . .	24
Zinc market . . . . .	234
Chinn, W. P. . . . .	174
Chino Copper Co. . . . .	
—Annual report . . . . .	884, (erratum) 1104
Dividends, 1917 . . . . .	159
By months . . . . .	32, 656
—Production . . . . .	252, 806, 959, 1101
Quarterly report . . . . .	556
Chloride Queen Mng., Ariz. . . . .	812
Choate, P. C. Fine grinding of zinc charge, . . . . .	558, 883, 1176
—Sodium manganate in flotation . . . . .	797
Choctaw chief, Okla. . . . .	982
Chope, T. J. . . . .	528, 529, 918
Christensen, H. L. . . . .	700
Chrome. See also “Ferrochrome.” . . . . .	
Chrome brick, for copper refining furnaces, . . . . .	
Disadvantages . . . . .	9
Chrome—Calif. 574, 660, 938, 940, 981, 1023,	
	1063, 1109, 1149
Producers . . . . .	420
Specifications . . . . .	420
Chrome Concentrating Co., Calif. . . . .	462
Chrome, Concentration . . . . .	462
Chrome, New Caledonia, deposits . . . . .	1124
Chrome ore—Analyses . . . . .	1124
Market . . . . .	1056
Chrome, Production and distribution . . . . .	634
Chrome—U. S. import-control . . . . .	1139
—1917 review . . . . .	134
Production and distribution . . . . .	967
Shortage . . . . .	256
Chrome. World deposits . . . . .	1124
Chromite—Alaska deposits . . . . .	777
—Calif. . . . .	564
—Canada, 1917 . . . . .	590
—Ore . . . . .	1091
Imports restricted . . . . .	335
Chromium, Calif. . . . .	305
Chromium determination . . . . .	243
Chronology of mining, 1917 . . . . .	77
—By months . . . . .	77, 303, 483, 691, 892, 1054
Church, J. L. . . . .	34
—Photo . . . . .	*953
Chute mouth repairing . . . . .	*923
Chutes, Safety devices . . . . .	966
Cincinnati, Calif. . . . .	263, 354
Cinnabar, Tuscany . . . . .	425
Circle, Mo. . . . .	221
Circle Peak Mng. Co., Ariz. . . . .	36
Claims, Ariz. . . . .	530
Clam Digger, Ark. . . . .	*1128
Clark Co., Nev. Manganese . . . . .	*775
Clark mines, Calif. . . . .	398
Clarkdale Improvement Co. . . . .	892
Clarke, E. de C. Geology of Meekatharra . . . . .	*766
Classification of feed—Dry sizing . . . . .	*908
Clausen, E. H. . . . .	351
Clays, analyses, Indo-China . . . . .	317
Clays, Foreign surpass domestic? . . . . .	803
Cleaning flotation concentrate . . . . .	715
Clear Creek Co., Calif. . . . .	219
Clemings, M. J. . . . .	941
Clennell, J. E. Estimation of manganese . . . . .	407
Cleveland Cliffs Iron Mng., Mich. . . . .	37, 82,
	264, 575, 662, 704
—Helmer mine . . . . .	264, 575
Cleveland, Gt. Br., iron stone . . . . .	1117
Clevenger, G. H. . . . .	396, 565
—Flotation vs. cyanidation . . . . .	743
Clift, A. . . . .	174
Climate, France and Belgium . . . . .	342
Climax, Colo. Molybdenum mng. . . . .	*905, *920
Climax Molybdenum Co., Colo. . . . .	575
—Descriptive Article . . . . .	*905, *920
Clinton Zinc Co., Ark. . . . .	36
Cloud, T. C. died . . . . .	937
Coahulia, Mo. . . . .	487
Coal—Alaska . . . . .	23
Nenana lands . . . . .	243
Anthracite women labor . . . . .	840
Bituminous . . . . .	45, 926
Dirty coal complaint . . . . .	475
France . . . . .	434, 916
Mining aid declined . . . . .	28
Gt. Br., Conservation by electrification . . . . .	27
Miners drafted . . . . .	1009
Coal lands restoration . . . . .	398
Coal Mng. Inst. of Amer.—Papers, etc. *584, *623	
Coal—Mont. . . . .	305, 352
Philippine Islands . . . . .	17
Powdered, as fuel . . . . .	*1105
Queensland . . . . .	1171
Serbia, Germans work . . . . .	166
South Africa . . . . .	742, 1174
1917 production . . . . .	1042
Stockpiles, Spontaneous fires . . . . .	156
Storage . . . . .	*601
Sweden . . . . .	932
—U. S. See also “Fuel Admin.” . . . . .	45, 802
Anthracite allotments . . . . .	1097
Bituminous . . . . .	926
Coal week . . . . .	1010
Conservation . . . . .	26, 1137
Distribution . . . . .	1181
Exports to Canada restricted . . . . .	928
Mine fatalities, 1917 . . . . .	429
Preference list . . . . .	754
Production, 1917 . . . . .	86, 334
Editorial . . . . .	808
R.Rs to pay full price . . . . .	802
Coal (Cont'd.) . . . . .	
Shortage . . . . .	211, 518
Shut down order . . . . .	258, 888
Editorials . . . . .	170, 218, 257, 347
<i>Eve. Post</i> editorial . . . . .	238
What caused crisis . . . . .	320
Trade wants binding contracts . . . . .	607
Zone distribution system . . . . .	605, 879
Utah . . . . .	400, 485
Venezuela . . . . .	1162
West, Australia . . . . .	8
World production . . . . .	71
Coaling Empire Oil, Calif. . . . .	307
Coastal plain, Ga.—Bauxite . . . . .	13
Cobalt, Ont., Flotation . . . . .	785
Cobalt, Ont., 1917 prod. . . . .	353
Cobalt-Zirconium hardening . . . . .	335
Cobaltite, Id. . . . .	24
Cochran, T. . . . .	978
Coeur d'Alene Antimony Mng. . . . .	1192
Coeur d'Alene district. See also “Idaho.” . . . . .	1148
Cement gun practice . . . . .	*787
Fine-crushing practice . . . . .	712
Flotation . . . . .	*707
Labor . . . . .	530
1917 review . . . . .	64, 145
Stoping methods . . . . .	*1069, 1103
Coghill, W. H. Chalcopyrite flotation . . . . .	422
Cohen, L. . . . .	396
Cohen, S. H. . . . .	852
Cohen, S. W. . . . .	174, 937
Coke breeze in copper precipitation . . . . .	1089
Coke preference list . . . . .	754
Coke prices unchanged . . . . .	167
Cole, A. A. Canadian industrial situation . . . . .	513
—Mng. engineering as profession . . . . .	765
Peat coal substitute . . . . .	176
Cole, A. N. . . . .	304
Colemanite, Calif. . . . .	*985
College of Mines, Wash. . . . .	1034
Collins, E. A. G. . . . .	396
Collins, G. E. Mining in Colo. . . . .	1190
Colombia—Mining, 1917 review . . . . .	125
Colorado—Molybdenum mng. . . . .	*905, *920
Petroleum . . . . .	938
Oil shale treatment . . . . .	*917
Potash . . . . .	897
Colorado School of Mines . . . . .	1191
Tribute to A. A. Blow . . . . .	216
Colorado Scientific Soc. . . . .	572
Colorado, Smelting investigations . . . . .	538
Editorial . . . . .	345
Smelting schedules . . . . .</td	

Page	Page
Concentration. (Cont'd.)	891
—Schwarz patented	560
Concentrator, Morning Star, Ark.	*329
Conclusiveness of department findings	583
Concrete, Colo.	355
Concrete mill construction	*877
Concrete ships. See "Ships."	
Condon, W. E.	937
Confidence, Calif.	1025
Conger, Ariz. See "Jerome Mng."	
Congo Chief, Colo.	1193
Congress, Colo.	355, 703, 899, 1109
Conigas Mines, Ont.	84, 488, 737, 1087, 1150
—Annual report	800
Flotation	785
Dividends	1019
Production	264, 942, 1110
Conklin, R. R. Porto Rico mng. decision	1147
Conkling Mng., Utah. Silver King Coal case	701
Conner, C. H.	927
Connally, J. M.	37
Connors Steel Co., Ala.	220
Conover, C. O.	396
Conscientious objectors provided for	606
Conservation, Editorial	694
Conservation of technical engineers	1055
Consolidated Ariz. Smg.	531, 617, 1114, 1192
—Dividends	656
Production	252, 806, 959, 1101
Consolidated Cop. Mines, Nev.	83, 178, 814, 1064
Consolidated Interstate-Callahan Mng	82, 177, 710, *1085, 1193
—Annual report	397
Dividends	260
Main hoist	*550
Quarterly report	1179
Consolidated Leasing, Colo.	81
Consolidated Mayflower, Nev.	1064
Consolidated Mines, Colo.	1193
Consolidated Mng. & Smg. Co. of Canada	88, 532, 812, 854, 938, 982, 1110, 1192
—Annual report	220
Bounty	1108
New charges	445
Consolidated Spanish Belt Mng, Nev.	982, 1194
Consolidated Virginia, Nev.	222, 576, 662, 704, 942, 1061, 1147
Mng. methods	*1029
Consolidated Zinc, Ark.	661, 1149
Consolidation Coal Co.	623
Constancia, Mex.	308
Constitution Mng. & Milling, Ida.	82
Constitutional Lead & Zinc, Okla.	447
Construction costs—United Eastern	294
Construction, New, 1917.	80
Continental Mng., Ark.	263, 306
K. and M.	36, 899
Contracts, "Cost-plus"	754, 926
Editorial	933
Contracts, Govt.	476
Control of oil lands, Trinidad	1110
Cook, R. C. Pipette	*604
Cooke, G. D., died	261
Cooke, J. H.	261
Cooper, J. O.	1110
Cooperation, Industrial, after the war	33
Co-operative rescue work	252
Co-operative stores in mng. towns	830
Co-ordination in conduct of war	760
Coosa Graphite, Ala.	898
Copper, Alaska	263, 486, 574, 812, 1024
Copper amalgam as cement	780
Copper anode, Lugless.	*924
Copper, Ariz. 1917 review	58
Australia. Costs	1100
Production, 1917	131, 952
Selling	58
Copper Basin Mng., Ida.	82
Copper, Boronite	206
Copper, B. C.	1100
Copper, Butte, 1917 review	175
Copper Buttes, Ariz.	940
Copper, Canada, 1917	588
Copper Chief Mng., Ariz.	220
Copper Conference	1050
Copper Creek Alta Mng., Ont.	618
Copper determination in oxidized ores.	552, 645
—Iodide, with sodium ferroxide.	1170
Copper, effect on steel.	371
Copper for shipbuilding. Editorial	394
Copper, Flotation	717
Copper King, Alaska	1024
Copper King, Calif.	399, 1063, 1192
Copper King, Colo.	263
Copper King, Ida.	263
Copper, Lake Superior, 1917 review	57
Copper market in 1917.	55
Vogelstein & Co.'s review	216
Copper metallurgy, 1917 review	94
Copper, Mich.	1107
Copper Mountain, Utah	488
Copper, Nev., deposits	455
Copper, Ont.	1087
Copper ore heap leaching	*225, 430
Copper oxide determination	372
Copper, precipitation with coke breeze	1089
Copper, Price fixing	1050
Editorial	257, 1016
Mont. men dissatisfied	262
Copper Producers Assoc., Australia	58
Copper production. Editorial	763
Copper Queen Consol. Min.	1114
—Air-controlled fire-door	*559
—Change house	*20
—Efficiency training	200
—Pensions and insurance	831
—Production	306
—Shift boss duties	376
Copper, Queensland	1171
Copper Ranch, Nev.	250
Copper Range, Mich. See also "Trimountain,"	263, 399, 447, 532, 575, 617, 941, 1026,
—Annual Report	1064
Dividends, 1917.	159
By months	32, 656
Copper refineries and preferred list	891
Copper refining furnaces—Chrome disadvantageous	9, 1083
Copper River, Alaska, Gold	543
Copper, Russia	127
Copper salts in flotation	735
Copper smelting and rfg. works, North American statistics	54
Copper, South Af.	742
1917	1042
Copper State Mng., Ariz.	80
Copper sulphate, Gt. Br.	824
Copper sulphate in flotation	712, 916
Copper—Sweden	932
Tasmania	1032
U. S.	252, 806, 1101
Cost. Editorial	438
Editorial	763
Freight increase	1098
Import restrictions	1183
Production, 1917	53
Imports and exports, 17, 302, 395, 806,	1041, 1141
—West Australia	8
World production	45, 53, 252
Copperopolis, Utah	222, 448, 618
Cordova Mines, Ont.	982
Mining costs	22
Cork—Province, B. C.	942
Corless, C. V.	514
Cornell, I. H.	978
Cornwall, G. M.	688
Corona, Calif.	940
Coronado incline top slicing.	*246, 279
Corrigan, Ida	355
Corrigan, J.	928
Corrosion, electrode supports	837
Corrosion, pipe	287
Corundum, Madagascar	683
Cost of living. See "Living."	
"Cost plus" contracts	754, 926
Editorial	933
Costa Rica Manganese & Mng.	264
Costa Rica—Mining, 1917, review.	122
Coste, E.	1099
Costigan, E. P., photo	*829
Costs—Australasian copper	1100
Blasting powder, Alaska	*922
Car repairing	1174
Concentration, comparative	104
Construction, United Eastern	294
Drift-gravel Mng. Siberia and Calif.	864
Filtration, Utah Lsg.	726
Flotation, Buffalo	104
Gold mng. U. S.	870
Hotel for workmen, B. C.	1090
Leaching, heap	226, 231
Milling, Joplin	727
Surf Smeit., B. C.	723
Mng.—Alaska-Gastineau	1007
Aus.	1100
Cordova, Ont.	22
South Af., 1917	1042
Mng. Supplies, Aus.	952
Increase	871
U. S.	871
Mng., underground, Cuyuna	273
S. E. Mo.	1162
Nitrate leaching, Chile	990
Oil-feed pipes laid	546
Operating, Kerr Lake	250
S. E. Mo.	1162
Production, Colo.	855
Jumbo Exten. Tom Boy	251
Silver mng., Nipissing	1179
Stoping, incline top slicing.	279
Cotton, price fixing	299
Cottrell precipitator	879
Couby, H.	919
Couldrey, F. S.	261
Council of Nat. Defense—Labor plan	212
Platinum commandeered	605
Wire rope standardization	608
Coupal, J. S.	351, 1190
Couplings, Air-hose—Nut and gasket	*599
Cover for shaft cageway	*1047
Cowan Barrens Deep, Ark.	661, 702, 940
Cowdry, Lord. Petroleum in Gt. Br.	824
Cowperthwaite, T. Safety first	566
Crago, W. H.	174
Cramer, S. W.	688
Cranberry Iron, N. C.	576
Crane Oil Slate, Utah	1064
Crane, W. R. Ore. mng. methods	1527
Crankpin, truing	*246
Cramston, R. E.	659
Crawford-Ansell, Ark.	1108, 1192
Crawford, G. E.	1098
Credits, War	889
Oreighton, Ont.	*960
Cresote as frothing agent	733
Crerar, G. Flotation operators' instructions	878
Crerar-Hewitt, Ida.	710
Crescent, Kan.	1193
Cresson Consol. Colo.	37, 355, 487, 575, 813, 941, 1026, 1109
—Dividends 1917	159
By month, 32, 280, 440, 656, 843, 1019	
Crimora Manganese Corp., Va.	532, 875
Crimora, Va., manganese mng.	875
Cripple Creek Gold Mng., Colo.	263
Crippled soldiers' reconstruction	428, 1172
Crisis. Editorial	213
Cristobalite refractory brick	954
Crosby Explor., Minn.	177
Cross, J. H.	940
Crocker, W. Attaching fuse to primers	*1133
Croesus, Ont.	576, 1087
Crossheads, Cripple Creek, Colo.	1047
Crowell, B.	*237, 471
Crown Reserve, Colo.	1350
Crown Reserve, Ont.	264
Production	356
Crowning a large pulley	247, 431
Cruse-Consol., Mont.	264, 487, 575, 704, 941, 1150
Cruse Devel Co., Mont.	38, 487
Crushing. See also "Milling," "Ball-Milling,"	
Crushing practice, Coeur d'Alene	712
Crystal Lake, Calif.	1025
Crystals Goldsmith, Mont.	264
Cuba—Boletin de minas	*350
Cuba—Iron deposits	1002, 1123
Land sale	31
Manganese prospects	779
Mining, 1917 review	121
Cumberland, Colo.	708
Cumberland iron ore deposits	1117
Cunningham w. Costello	980
Current prices, 43, 311, 491, 773, 908, 1067	
Curtis, S. T.	1058
Curtis, Calif.	398
Cushman dist., Ark., photos	*1128
Custer Peak Milling & Ore, S. D.	83, 1110
Cut out the waste—Editorial	684
Cutout, trolley line	*291
Cutting, S. D.	514, 1110
Cuyler Adams, Minn.	177
Cuyuna district—Manganiferous iron mining,	
Cuyuna-Mille Lacs Iron, Minn.	*269, 530
Cuyuna-Minneapolis Iron, Minn.	82, 270
Cuyuna shipments 1911-17	177
Cyanide solutions—Gold precipitation	506
Cyanidation, Costs, Buffalo mine	104
Cyanidation vs Flotation	645, 743
Cyanide in Flotation	736
Cyaniding concentrates vs. smelting	454
Cyaniding graphitic ores	197
C. C. Consol., Utah	178
D	
Dakota Continental, S. D.	900
Dalimage, V.	1192
Dalrymple, J.	1165
Daly-Judge, Utah—Controls Daly-West	529
Daly-West Mng., Utah	222, 308, 856, 1061, 1150
—Annual report	1135
Daly-Judge controls	529
Dividends	260, 843
Danforth, G. L. Jr.	767
Dante, Colo.	813, 855, 1109
Danube, Minn.	1110
Darling, I. C.	927
Darlington, T. Illness in industry	428
Darwin Devel., Calif.	81, 769
Data of world's principal mines	87
Davenport, L. D. Steam shovel mng.	*403, *493, *508, *579
Editorial	524
Davidson, O. C.	304
Davison, Out. 38, 178, 222, 356, 400, 448,	532, 662, 704, 767
Davies, J. G.	1064
Davies, J. W.	942
Davis, A. V.	761
Davis-Daly Cop., Mont.	83, 222, 1150
Production	488
Davis, R. B. Co.	879
Davis, W. N.	688
Day, J. J.	446
Day, P. C. European climate	342
Daylight Mng., Ariz.	1063
Daylight saving bill	519
Dayton Coal, Iron & R. R., Tenn.	704
De Armond, Kan.	448
De Camp, W. V. Bonne system	461
Nut for air-hose couplings	*599
Deadwood, Colo.	1109
Deadwood Lead & Zinc, S. D.	83, 376, 704, 1150
Dean, N. W.	896
Dean, R. S.	810
Deane, W. A.	218
Death Valley, Calif.—Borax.	*985, *1000
Debris, Mining, Calif.	105
Debts, National	838
Debts, National. Principal belligerents	872
Deepest well in world	591
Deer Trail Mng., Utah	83, 770
Deer Trail No. 2, Wash.	1110
Del Mar, A. Soda feeder.	*719
Treatment of flotation concentrates	*1177
Del Monte, Ariz.	307
Delano, F. A.	887
Delhi, Calif.	81, 486, 1193
Delplace furnace	97
Demarest, D. J. Electrolytic antimony	10
Demurrage rates increased	167
—Colo.	853
Denbigh Mng., Colo.	899
Denby Mines, Colo.	813
Denn-Ariz., Ariz.	306, 854, 1024
Dennison, W.	978
Densmore, Calif.	399
Denver Civic & Commercial Assoc.	979
Denver Mng. & Mfg., Colo.	855, 941
Deposition tax calculation	202
Deposition removal—Hydrochloric for	726
Depreciation and obsolescence	631
Depreciation tax calculation	202
Derailing switch	*515
Derry Ranch Dredge, Colo.	355
Desert Mountain, Utah	38, 178, 308
Desert Power & Water, Ariz.	353
Desert Prod., Calif.	813
Desloge Consol. Lead, Mo.	66, 1155
Determination of copper in oxidized ores	552
Detroit Hoist & Mach. Co.	597
Detweller, A. N.	304
Devil abrasion test	1038
Development of community interest	830, 883
Diabase as tube-mill pebble	1039
Diamond core drill	*1086
Diamond-drill bit recovery	259
Diamond R. Mng., Wash.	448
Diamond saw	*1036
Diamonds, South Africa	885
Diatomaceous earth, B. C.	1062
Dick, J. C.	896
Dickinson, E. S.	218

	Page
Die manufacture, Transvaal.	425
Dietary for miners.	627, 883, 1090
Differential flotation, lead and zinc.	741
Dig Gold Mng., Colo.	37
Diorite as tube-mill pebble.	1039
Direction of the war. Editorial.	258
Directors' reports, Standardization.	825
Distillation furnaces. See "Furnaces."	
Dividends. See also names of companies.	32,
	260, 440, 656, 843, 1019
—Table, 1917	159
Dixie, Ariz.	898
Dixie Girl Mng., Ark.	574, 899
Dixie Graphite Co., Tex.	83
Dixon Crucible Co., Jos.	844
Dixon, P. St J.	304
Doctor, Colo.	899
Dodd, E.	572
Doe Run Lead, Mo.	65, 1157
Dolbear, S. H. Chrome production.	634, 967
Dole, R. B. Mineral springs, Alaska.	1936
Dollar exchange, Chile.	436
Dollars, Silver, Melting begun.	840
Dolly, Colo.	941
Dolman, P. B.	700
Dolt, M. L. Chemical French	1105
Dome Exten, Ont.	400, 448, 704, 1150
Dome Lake, Ont.	177, 222, 264, 308, 356,
	488, 767, 1194
Dome Mines, Ont.	38, 356
Dominican Repub. Petroleum	1041
Dominion Reduct, Ont.	488, 900
—Flotation	788
—Production	264, 942, 1110
Dominion Steel Corp.	980, 982
Donora Zinc Co., Penn.	83
Dorr, G. H.	810
Dorr, J. V. N.	719
Dorr thickeners	713, 724
Dorry hardness machine.	*1036
Dorsey, G. D.	852
Douglas, Ida.	37, 900, 1026
—Dividends	32, 260
Douglas, J.	218
—Died. Editorial	1197
—Leaching experiments	*226
Douglas, W. Bisbee deportations.	1055
—Copper, Ariz.	58
Downs, F. G.	614
Draft gages, notes.	*292
Draft, Military, by industries.	842
—Chemists deferred classification.	548
—Conscientious objectors provided for.	606
—Physical classification	565
—Reclassification	1098
—Registration day	1010
Drafting room light	516
Drag classifiers in nitrate leaching.	*987
Dragon Consol, Utah.	222, 260, 618, 856
Dragon M. & D., Ariz.	1108
Drainage. See "Unwatering."	
Draper, F. W. How Draper brought out the platinum.	510
Draper, Minn.	1110, 1193
Drawings on tracing paper.	247
Dreadnought, Ida.	1026
Dredges, Gold—Safety rules.	853, 1061
Dredging. See also "Gold."	
Dredging—Will redredging pay?	*1
Drift-gravel mng. in E. Siberia.	894
Drift round, Method of firing.	*1132
Drift costs, Cordova, Ont.	22
Drill, Diamond core.	*1036
Drill holes—Marking methods	798
Drill, Jump, yoke.	*582
Drill rack, Underground.	600
"Driller." Carr v. crossbit.	185
Drilling record, Petroleum, Kan.	819
Drilling time, Average, oil wells.	546
Drills, Extracting stuck or broken.	*516
Droege, Calif.	899
Drucker, A. E. Cyaniding vs. smelting.	454
Drum, J. S.	887
Drury, C. W.	1106
Dry Bone. See "Fox Den."	
Dry Canon, Utah.	400
Dry sizing of feed for concentration.	*908
Dub, G. D.	1012
Duffield, C. C. died.	572
Ducway Bertha, Utah.	222, 448
Dugway Smelter, Utah.	488, 900
Duluth Engineers' Club.	1106
Duluth housing scheme.	1102
Dumping device, Mine car.	*600
Dumps, Mine, assessable.	615
Duncan, Colo.	1063
Dundee-Ariz., Ariz.	220, 307, 1108, 1114
Dunkin Lease, Colo.	398
Dunlap, D. A.	1146
Dunlop, J. P.	919
Dunncliffe, H. B. Mercury purification.	604
Du Pont de Nemours Powder Co.	988
Duro-Flake Graphite, Ala.	486, 898
Dust—Manganese estimation.	407
Dutch-App. Calif.	768
Dutch East Indies exports.	1142
Dwight-Lloyd machine grates.	293
Dye, R. E.	444, 785
—Flotation and cyanidation costs.	104
E	
Eagle & Blue Bell, Utah.	38, 576, 814, 1026
Eagle Ore, Colo.	813
Eagle-Picher Lead.	768, 939
—Netta mill	*727
Eagle-Shawmut, Calif.	81, 307, 768, 1149
Earle, E. P.	76
East Butte Cop. Mng., Mont.	680, 900
—Annual report	1094
—Production	252, 308, 400, 488
Eastern Star, Ark. See "Miami-Yellville."	
Easton, H. D.	896
Easton, S. A.	460, 854
Coeur d'Alene district.	64
Eccles, S. W. Amer. S. & R. in Mexico.	67
—Died.	24, 67
Echo, S. D.	1110
Eckel, E. C. Iron ore analyses.	1120
Eclipse-Argo, Mont.	177
Economic aspect, flotation, S. E. Mo.	364
Economic, Colo.	855
Economic considerations, Some. Editorial.	393
Economic geology, by Emmons.	*527
Economic policy, Changes in. Editorial.	933
Economic policy, Our. Editorial.	696
Economic program in Great Britain.	598
Economy in oil urged.	1051
Economy methods	548
Economy mine, Mont.	178, 618, 662
Ecuador, Mining, 1917 review.	124
Eddington, F. T.	1012
Eddy, L. H. Mng. lower levels, Constock Lode	*1029, *1044
Edgar, G.	930
Edgar Zinc Co. Glendale works. Editorial.	847
Education and Special Training Comm.	434
Edwards, C. S. Dominican oil.	1041
Edwards, Ont.	400
Edwards, R. M.	218
Effect of addition agents in flotation.	*915
Effects of high temperature on workers.	998
Efficiency methods	200
Ehrenberg, E.	770
Eighty Eight, Utah.	308
Eighty Five Mng., N. M.	83, 264
El Dorado Mine & Minerals, Calif.	531, 1025
El Oro Dredging Co., Calif.	1
El Oro liners.	245, 713
El Paso Consol, Calif.	617
El Paso Exten, Colo.	532, 617, 900
El Paso Gold King, Colo.	1109
El Tire Cop., Ariz.	981
Elba, Iron ore deposits.	1122
Elder, Ariz.	981
Elder Creek Chrome, Calif.	940
Eldorado Lime & Minerals Co.	1109
Eldorado Slate Corp., Ariz.	940
Electric Alloy Co.—Lucero.	234
Electric Hoist Mfrs. Assoc.	597
Electric Mng. Co., Ark.	80
Electric Point, Wash.	942, 1110, 1150
Electric power for mng., Yavapai, Ariz.	*1113
Electric power rates, Calif.	897
Electric smelting, Phosphate	879
—Scrap iron	574
—Sweden	638
Electric welding in shipbuilding.	927
Electrical mfrs. to conserve tin.	1138
Electrification, Gt. Br.	27
—R. R.'s urged	434
—Statistics	483
—U. S.	754
Electro-Metallurgical Co.	756
Electrochemical works, Shawinigan, Can.	441
Electrode supports, Corrosion	837
Electrolytic antimony from stibnite.	10
Electrolytic copper refineries, U. S.	95
Electrolytic Rfg. & Smg., Aus.	59
Electrolytic Zinc Co. patent.	1088
Electrolytic zinc extraction.	97
Eleventh Engineers	173
Elk Hills oil land fraud.	1023
Elk Lake water route.	1024
Elkton, Colo.	177, 487, 769, 855, 1109
Ella B., Colo.	177, 447, 855
Ella, Mont.	1079
Elliott, A. H. died	484
Elliott-Kirkland, Ont.	356, 618, 856, 982, 1110
Elliott, R. H.	659
Elliott, S. R.	572
—Photo	756
Elliott's Copper Works, N. S. W.	882
Ellis, C. B.	572
Ellison draft gage.	*292
Elm Oriu Mng., Mont.	83
—Butte Sup. litigation.	488, 701
Elmore vacuum concentration, Norway.	500
Elonis, Mo.	1157
Elloosa, Okla.	1110
Elton, J. O.	1146
Ely-Scott Synd., Ont.	576
Embree Iron Co., Tenn.	*285
Emerald Isle, Ariz.	1108
Emerson, B. T. Geology of Mass.	*766
Emery, Naxos.	212
Emigration after the war.	803
Emma Consol., Utah.	178, 400, 770, 856
Emma Cop., Utah. Production.	488
Emmons, W. H. Economic geology.	*527
—Ore deposits	105
Empire-Ariz. Consol. Cop., Ariz.	769
Empire, Calif.	81, 531, 573
Empire Cop. Co., Ida.	82, 1109
—Dividends	260
Empire Dist. Elect. Co.	733
Empire-Duluth, Colo.	1025
Empire Refineries, Kan.	821
Employer and reconstruction of crippled soldier.	1172
Employers' liability for defective steam shovel	425
Employment zones	688
End-dumping mine car.	*600
Engels Cop., Calif.	81, 1025, 1193
—Production, 1917	529
"Engineer." Community interest.	883
Engineer Examining Bd.	1187
Engineer Regiments. See "Eleventh," "Twenty-seventh," "Thirty-third," "Replacement."	
"Engineer." Safety practices.	966
Engineering chemistry	*527
Engineering Council. Conservation of tech. engineers.	1053
Industrial efficiency	891
Engineers—Army and navy need.	167, 424, 968, 1095, 1097
—Cambrai action	793
—Combat wagon	*7
—Conservation	1055
—Examinations	1137
—Railway regiments	1142
Engineers Soc. of Western Pa.	896, 1022, 1060
—Annual meeting	351
England. See "U. K."	
Enrichment of ore deposits.	105
Equipment costs. See "Construction."	
Ernst, H. C. Hygiene for lead workers.	384
Essential Prod. Co., Mo.	1108
Estes, C. Petroleum in Kan.	480
Ethics, Professional	189
Ethiopian, Colo.	1149
Eucalyptus wood liners.	713
Eudialite & Hoist Co.	597
Eureka, Ark.	1149
Eureka Bullion, Utah.	704, 814
Eureka, Calif.	1027
Eureka Lily, Utah.	356, 662, 814
Eureka Manganese & Mng., Ark.	574
Evaluation, Wis. zinc mines.	778
Evans, A. W. died.	351
Evans, Dredge, Colo.	1106
Evans, J. W.	957
Evaporation plant, Nitrate leaching.	*989
Evans-Thwing Rfg., Kan.	821
Evening Post. "Cost plus" contracts.	926
—Germany seeks Caucasus manganese.	927
—Gross blundering	238
—President and the war.	973
—Real red tapers	300
—Taking over" by the govt.	498
Evening Sun on price control.	233
Evergreen, Colo.	355, 813, 1025
Every American's duty.	306
Examination of ores.	*723
Excelsior Mng. & Lsg., Colo.	263, 307, 447, 855, 1109
Excess profits tax. See also "Taxation, U. S."	
Excess profits of mines. Editorial.	975
Excess profits tax reviewers.	688
Exchange, Dollar, Chile.	436
Exhaust gases in mines—Disposal.	
—Experts." Times on.	
Explosives Act.	615, 1023
—Regulations	378
Explosives, Permissible	*1105
Exports control.	343, 390, 968
Express companies merged.	1051
Express shipment rules.	658
Express Traffic Assoc. Rules.	658
Extracts from diary of Bolshevik smelterman.	489
Extralateral mng. rights.	273
F	
Fabre, C. died.	444
Fahrenwald, F. A.	572
Fairbanks Gold, Alaska.	1024
Fairfax Gold Mng., Colo.	1108
Fairview, Colo.	487
—Faith" launched	607
False representation claim upheld.	1147
Fan, Schlotter ventilator.	*206
Fanny Rawlings, Colo.	355
Far Eastern Rand, South Af.	129
Farnon vs. Silver King Coal.	187
Farr-Wiebold Electric, Utah.	897
Farrant, R.	924
Fay, A. H. Coal mine fatalities.	424
—Standardization of accident reports.	1160
Fay, Minn. See "Hanna Ore."	
Fearn, P. L. R. died.	853
Feats of labor. Editorial.	1054
Federal Gold, Calif.	813, 1023
Federal income tax regulations.	301
Federal Lead Co., Mo.	66, 111, 931
Federal Mng. & Smg.	82, 447, 661, 931
—Bourne law decision.	151
—Dividends, 1917	
By months	32, 650
Flotation methods	710
Morning, Ida. mine.	177, 307, 399, *714, *75
Macquisten tubes.	707
Star Mng. case.	664
War Savings campaign.	616
Federal Shipbuilding Co.	921
Federal Synd., Mich.	177, 308, 399, 532, 617, 704, 981, 1026, 1109, 1141
Federal Trade Comm. Rept. on anthracite.	176
Feed, Concentration, Dry sizing.	900
Feed trouble correction, Janney machine.	714
Feeding stamp platform	*922
Fees, Professional	189
Feldspar, Potash extraction.	176, 383
—Sweden	933
Feldtmann, F. R. Geology of Kalgoorlie.	176
Fellowships—Univ. of Ill.	193
Fennells in tube-milling.	1032
Fennell, C. G.	114
Ferguson, C.	1024
Ferguson, G. H.	106
Ferguson, H. G.	759, 1024
—Graphite	
—Tin deposits, Va.	
Ferraris, E. Italian mineral prod.	833
Ferry, Minn.	27
Ferroalloys, Metallurgical, 1917 review.	19
Ferrochrome situation.	24
Fermoranganese. See also "Manganese."	
Fermoranganese, Anaconda to produce.	523, 677
Fermoranganese and spiegelelsen, 1917 review.	7
Fermoranganese data.	677
Fermoranganese plant, Anaconda.	677
—Fermoranganese." Price of manganese.	1177
Ferrous sulphate in notation.	91
Fertilizer ingredients.	98
—Licensed	56
Field, A. L.	34, 70
Filter, American.	716, 707
Filters, Continuous	*95

	Page		Page
Filtration—Coeur d'Alene practice.	716	Foreign trade sec. for Cabinet.	837
—Cost, Utah Lsg.	726	Forest Queen, Colo.	487, 617, 1064
—Device for fastening.	*604	Forge from roll shell.	*208
—Tricks in.	837	Forge, Heavy mine.	*291
—Utah Lsg. system.	*724, 726	Formulas—Hoisting ropes.	1047
Financial America. Non-essential industries.	607	—Ore sorting.	1178
Financing our second year in war.	834	Forester, H. W.	978
Finch, J. W., photo.	274	Fortuna, Calif.	307, 1149
Fincher, S.	32	Fortuna Consol. Ariz.	176, 398
Fine-crushing Coeur d'Alene.	712	Fortuna Mng., Ariz.	.855, 898
Fine grinding zinc charge.	.370, 558, 883, 1174	Foster Bill.	701
Finlay, J. R.	937	Fowler, G. W.	1190
Florentino, G.	836	Fox, A. W. Crowell cuts red tape.	*237
Fire-door, Air-controlled.	*559	Fox Den Mng., Ark.	263
Firebrick—Melting points.	22	Fowle, H. W.	852, 1012
Firedamp in gold mines.	184	France, Bauxite.	896
Fireproofing mine shaft, Anaconda.	*1126	—Chemicals, mfr.	156
Fires, Spontaneous, in coal.	156	—Climate.	324
First aid training.	252	—Coal.	434, 916
First National Cop., Calif.	574	Mining aid declined.	28
—Dividends.	440	—Labor.	636
Fish, F. P.	891	—Law.	255
Fishback, M. Molybdenum and Mines Control Bill.	966	Quarries inspected by U. S. Engrs.	*636
Fissures Explor. Co., Utah.	38, 83	Franklin Inst.	1022
Fitch, H. A.	484	Franklin, Mich. 37, 177, 263, 355, 447, 532,	575, 704, 981
Fixing price of manganese. Editorial.	1057	—Production.	487
Flag Day.	1051	Franklin Moore Co.	597
Flaketown Graphite, Ala.	281	Fraser, D. D.	304
Flannery, J. M.	1012	Fraser, J.	887
Flannery Zinc, Mo. Air compressor drive.	*685	Fraser, W.	1190
Flat River, Mo., district.	*1153	Fraud in "cost-plus" contracts.	754
Fleming, J. R. Permissible explosives.	*1105	Fredericktown district, Mo.	38
Flinn, A. D. Conservation of technical engineers.	1055	Free Coinage Consol., Colo.	813
Flints in tube-milling.	*1033	Free Coinage, Mont.	618, 856
Florence Mng. & Milling, Utah.	83, 618, 770, 856, 1026, 1064	Freehold Oil & Gas, Mo.	400, 487
Florence Silver, B. C.	1194	Freeman, F. W.	1107
Flotation—Ariz. practice.	717	Freeport Sulphur Co., Tex.	83, 1171
—Belmont Surf Inlet mines.	*720	Freezing—Calcium chlor. prevents.	247
—Briquetting vs.	1176	Freight rates decision.	565
—Callow pneumatic cells.	*708, 710, 717	Freight rates, increases on copper and lead	1098, 1183
—Cascade machines.	717	Fremont, Calif.	486, 768, 1108
—Broken Hill unsuccessful.	251	French Complex-Ore Reduct. Co.	854
—Chalcopyrite, So. Ore.	422	French electrolytic separation.	853
—Chemicals.	712, 797, 916	French Gulch Gold Dredging, Colo.	177, 487, 769, 813, 1109
Cobalt, Ont.	785	French, T. S.	853
Coeur d'Alene district.	707	Frick, Mont.	1110
Concentrates, Treatment.	*1177	Friedman, L. A.	929
Costs, Buffalo mine.	104	Frink, L. D. Canvas tube ventilation.	325
Cyanidation vs.	645, 743	Frontenac, Colo.	307
Gangue minerals and.	738	Frost in Alaska.	338
Graphite, Ala.	282	Fuchs, F. C. Identification of molybdenite.	991
Groch machine.	737	Fuel administration. See also "Coal, U. S."	927
Haley's patent.	548	—Address by G. S. Rice.	433
Handling concentrates, Utah Lsg.	*724	—Anthracite allotments.	1097, 1137
—Heavier than water media.	427	—Coal complaint.	475
Hebbard machine.	717	—Coal distribution.	1181
Horwood process.	742	—Coal trade wants binding contracts.	607
Janney machine 710, *714, 715, 717, 719, *748		—Coal week.	1010
Jones-Belmont cell.	*720	—Fuel order suspended.	388
K. & K. machine.	711, 718, 746	—May abrogate private oil contracts.	606
Kraut machine.	*746	—May cancel coal contracts.	657
Macquisten tube.	*709	—Must save coal.	1137
Mexico.	103	—Non-essential industries.	436
Minerals Sep. cases. See "Minerals."		—Oil economy urged.	1051
Minerals Sep. license.	332	—Oil situation summarized.	517
Minerals Sep. machine.	717	—Petroleum price.	1053
Mo.	176	—Power generation at coal mines.	754
Economic aspect.	364	—Saving in power plants.	1008
Oil.	915	—Wire-rope mfrs. meeting.	753
Canadian experiments.	702	—Zone system.	605, 879
Tests.	1043	Fuel oil license.	341
Operators instructions.	378	Fuel value of wood.	16
Patent litigation. Editorial.	934	Fuming liquids—Pipette.	*604
Progressive, 1917.	99	Funk, W. A.	810
Ruth machine.	*749, *752	Furiow, J. W.	930
Safety rules needed.	188	Furnaces, Distillation.	98, *467
Seale-Sellschaefer machine.	718	—Reverberatory, Chrome brick disadvantages.	9, 1083
Selective, Aus.	739	—Roasting.	97
Bureau of Mines experiments.	768	—Zinc distillation.	*467
Ida.	485	Fuse, Attaching to primers.	*1133
Soda feeder.	*719	Fuse ignitor.	*1046
Sodium manganate in.	797		
Troubles.	735		
Utah Lsg. plant.	*535		
Zeigler machine.	*708, *711		
Flow sheet—Chalcopyrite pyrrhotite ores.	423		
—Chrome, St. Francis.	462		
Concentration, Dry feed, wet gravity.	908.		
	910, 911		
Concentration, magnetic.	913		
Determination in new mills.	792		
Flotation, Belmont Surf Inlet, B. C.	*720		
Utah Lsg.	536, 537		
Milling, Eagle Picher.	*728		
Flower, H. C.	887		
Flux dust cyaniding.	369		
Fluorite for optical purposes.	522		
Fluorspar, Wash.	982		
Flux, Ariz.	854, 1024		
Flynn, T. J.	810		
Fogg, D. E.	1012		
Fohs, F. J.	896		
Folsom, D. M. apptd. petroleum supervisor.	388		
Food a mighty weapon.	518		
Food Administration.	26		
Distribution powers asked.	342		
Food—Diet for miners.	627, 883, 1090		
Food invention, Maxim's.	171		
Foot Hill Cop., Calif.	617		
Foot, F. W.	614		
Concentrates box.	*294		
Feeding stamp platform.	*207		
Shaking screen.	836		
Tungsten determination.	836		
For consideration of General Staff. Editorial.	483		
Forbes, A. B.	887		
Forbes, C. R.	174		
Forbes, D. L. H.	1022		
Forbes, G. R. died.	978		
Ford Creek Oil, Mont.	356		
Ford Gold & Silver, Ariz.	1063		
Foreign Mines Devel. Co.	907		
Foreign Trade Conv., Cincinnati.	210	Gases, Exhaust, in mines—Disposal.	633
		Gasket for air-hose couplings.	*599
		Gaskill, J. P.	700
		Gasoline economy.	342
		—Exhaust in mines, Disposal.	633
		—Price to Allies fixed.	1009
		—Safety rules.	610
		Gaulin, A. Bauxite, France.	156
		Geary, W. P. Australasia.	131
		Geisendorfer & Farmer, Calif.	899
		Gem & Float, Colo.	813
		Gem, Colo.	813
		Gemini, Utah.	488, 900, 1064
		—Dividends.	400
		General Bauxite Corp., Ga.	14
		General Cement Prod. Co.	585
		General Devel.—Dividends.	32, 656
		General Mines Co. of Nev.	80
		General Mines Devel. Ariz.	855
		General Petroleum, Calif.	219, 615
		General Reduct. Colo.	1193
		Genesee, Ont.	81, 856
		Geological Soc. of London.	614
		Geologist, Petroleum, Work of.	822
		Geologists, State, list.	150
		Geology, Economic, 1917 review.	105
		Geology—Nev.	705
		Geology of Ely, Nev.	*786
		Geology of Mass.	1786
		George, C. H.	660
		George, D. Lloyd. A. Cheraadame on.	760
		George, H. C. Evaluation Wis. mines.	322
		George, J. K.	855
		George, R. D.	34
		Georgetown Tunnel, Colo.	1109
		Georgette Mng., Mo.	82, 448
		Georgia, Bauxite.	13
		—1917 production.	1004
		Georgia Kaolin Co.	14
		Gegg, H. W.	767
		German industry.	803
		German propaganda.	977
		German silver renamed.	907
		German Zinc Union.	789
		Germanium detection.	249
		Germany—Australian mines controlled.	1096
		Barbarities.	1145
		Iron.	809
		Lorraine iron ore.	1059
		Low grade mineral utilisation.	369, 914
		Manganese, Caucasus, wanted.	927
		Mng. and smg.	476
		National wealth.	1058
		Necessity of defeat.	746
		Nickel.	1098
		Nitrate.	948
		Oil-saving rules.	506
		Possession of Russian oil.	518
		South African interests.	888
		Trade war against.	474
		Trade conditions.	839
		Union of tech. and learned societies.	1138
		Gero Mfrg. Co., Vise.	*684
		Giant Ledge Mng., Ida.	82
		Gibbs & Co.	989
		Gibbs oxygen rescue apparatus.	*323
		Gibson Consol. Cop., Ariz.	898
		Gibson, E.	887
		Gibson, T. W. Ontario mining.	117
		Gidel, M. H.	1073
		Gifford-Cobalt, Ont.	38, 264
		Gifford, Supt.	914
		Giles Cop. Sulphide.	940
		Giles, Dovel, Ariz.	36, 398
		Gilbert, G. K. died.	1190
		—Hydraulic debris.	105
		Gilbreth, F. M. Crippled soldier in industry.	428
		Giles, H. F. Manufacturing opportunities.	Wash.
			*1105
		Gilpin-Eureka, Colo.	307, 355
		Giragossian, G.	809
		Glassware, Chem. compared.	248
		Glendale works. Editorial.	847
		Glenn, L. C.	218
		Globe Dominion, Ariz.	702
		Gloria Mng., Ark.	661
		Glove, Steel-grip.	*1049
		Glue—Trouble in flotation.	736
		Godfrey, J. R. Air blasts.	958
		Godiva, Utah.	400, 942, 1064
		Goetchnis, J. M.	614
		Goff, F. H.	887
		Goff well, W. Va.	591
		Gohlin Gold & Silver Mng., Calif.	486
		Gold—Adirondacks.	612
		—Alaska.	521
		—Copper River.	543
		—Amalgamation, Gold Coast.	367
		—Art consumption.	331
		Australia, production.	131
		B. C.	1100
		—Calif.	305, 768
		—Canada.	1108
		1917 production.	588
		Gold cathodes.	162
		Gold Chain, Utah.	770, 942
		Gold Cliff, Calif.	768
		Gold Coast Colony—Amalgamation practice.	367
		—Views.	*791
		Gold, Colo.	1061
		—Cyaniding graphitic ores.	197
		—Cyaniding vs. smelting.	454
		Gold-dredging in 1917.	108
		Safety rules.	853
		Gold Hunter, Ida.	713, 734
		Gold Industry and standard.	867
		Editorial.	867
		Gold King Mng. vs. McKirahan.	630
		Gold Ledge, Colo.	263
		Gold—Metallurgy.	645
		1917 review.	102
		—Mexico, embargo.	657
		Gold mines, Fire damp in.	184
		Gold mng. See also Costs.	657
		Gold mng. as investment.	430

Page	Page		
Gold mining. Is it necessary?—Discussion by Barnes, E. J.	158	Grassell Chem. Co.....	219, 853, 1108
Coolidge, E. B.	431	Grate, Riddell-Davison .....	293
Kerr, R. I.	157	Graef, A. Potash experiments.....	176
Lamb, M. R.	157	Gravel, Drift. See Drift-gravel.	
McGrath, T. O.	202	Gravity concentration.....	720
Non-miner.	204	Gray, C. A. ....	1012
Ross, G. McM.	204	Gray Eagle Cop., Calif.....	37, 356
Gold mng., U. S., Not curtailed.	928	Gray head, Calif.....	354
—Editorial	1143	Grayson, Mo.....	1150
Gold—Nev., deposits	455	Great Bend, Nev.....	982
—Ont.	1087	Great Britain. See "U. K."	
Gold ore mng., Ariz.	220	Great Cobar, Aus.....	59, 1100
Gold Pan, Manitoba.	856, 982	Great Fingal Consol., Aus.....	1062
Gold Park Consol., Calif.	1193	Great Northern Power Co., Minn.....	82
Gold precipitation with charcoal	506	Great Northern R. R.....	220, 660
Gold production and labor.	873	Great Salt Lake Oil & Gas, Utah.....	618
Gold—Quebec	980, 1148	Great Western Rfg., Kan.....	821
—Queensland	1171	Great Western Smelters Corp., Ariz.....	80
Gold Range, Ariz.	398, 446	Greece, Iron ore deposits.....	1122
Gold reserve, U. S.	561, 886, 971	Green Hill-Cleveland, Id. ....	710, 751, 938, 981
Gold, Rhodesia	869	Green Lead, Calif.....	769
Gold Ridge, Ont.	1064	Green-Meehan, Ont.....	900
Gold Road Bonanza, Ariz.	812	Green Monster Mng., Ariz.....	574, 855, 1114
Gold Road Mines, Ariz.	702, 854, 940, 1024, 1108	Green Mountain, Calif.....	1109
Gold—South Af.	644, 742, 1174	Greenback, Colo.....	930
Deposits	106	Greenback Mines Co., Ore.....	1025
1917 production	679, 1042	Greene-Cananea, Mex.....	83
1887-1916	869	—Dividends.....	1019
Gold standard and industry	867	—Production.....	222, 576, 770, 806, 942, 959, 1101
—Editorial	867	Greene, F. T. died.....	34
Gold State, Calif.	899	Greening, Okla.....	900
Gold, Sweden	932	Greensand as potash source.....	919
Gold Synd., Mont.	264	Greenway, J. C. photo.....	786
Gold, Tasmania	1032	Gregory, H. E. Geology of Navajo.....	766
Gold—Ton Mng., Nev.	83	Greisemer Graphite, Ala.....	446
Gold—Transvaal	129, 644	Grey Eagle Reduct., Ariz.....	354, 446
1887-1916	869	Griffith, Colo.....	359
1917	679	Griffith Lead & Zinc, Mo.....	356
—U. S.	45	—History.....	175
Industry and standard.	867, 894	Griggs, O. H. ....	34
Mining. Editorial	1143	Grimes, A. C. ....	1078
Not curtailed	928	Grinder, Pedestal.....	472
1914-1917	869	Grinding tests, Miami.....	426
Venezuela	1162	Grinding zinc charge.....	370, 883, 1175
—Washing, Yangtse Kiang.	793	Groch centrifugal flotation machine.....	737
West Australia	8	Groch, F. ....	737, 939
World production, 20 years.	45	Gross blundering.....	238
1912-1916	868	Groundhog, Ark.....	446
Golden Age, Colo.	1193	Grove, W. R. Food.....	518
Golden Center, Calif.	81, 221, 813	Grub Cut, Ark. photo.....	*1129
—Report	615	Guadalupe, Colo.....	855
Golden Crest, S. D.	308	Guess, H. A. ....	710
Golden Cycle Mng. & Reduct., Colo.	487	Guggenheim, D. ....	761
—Dividends, 1917	159	—Liberty loan message, photo.....	621
By months	32, 260, 440, 656, 843, 1019	Guggenheim, E. A. ....	978
Golden Eagle Mng., Okla.	82, 221	Guild, F. N. Microstructure of silver ores.....	106
Golden Reward, S. D.	308, 814	Gulf States Steel, Ala.....	80
Golden Rod Mng. & Smg.	768	Gulf Sulphur, Tex.—Views.....	*466
—Record production	220	Gum Tree, Colo.....	355
Golden Rule, Ariz.	1192	Gun, Cement. See "Cement."	
Goldfield Consol., Nev.	222, 871, 982, 1064	Gun Division to expand.....	610
—Annual report	1184	Gun, Long-range, German.....	754, 1104
Gompers, S. Statement to Amer. Fed. of Labor.....		Gunnison Cop., Colo.....	1025
Suggests 7 hr.-day	612	Gurley transit variations.....	21
Good Hope, Colo.	544	Gurstol, Norway.....	501
Good Will, Calif.	899	Guthrie, Colo.....	176
Goodwin Bros., Mo.	1063	Gympie, Queensland.....	439
Goodwin, L. H.	177		
"Gopher," hole loading device.	*406		
Gordon, Minn.	1110		
Gottsberger, Grinding results, Miami.	426		
Gould Placers, Mont.	38, 178		
Government-Control. See also "Mines," etc.	895		
Amer. Mng. Cong.			
Colo. Chap. opposes			
Utah Ch. opposes			
—Editorial			
Evening Post editorial			
Chrome			
Gt. Brit.			
Mines			
House Comm. hearings			
Editorial			
Governmental administration. Editorial	213	Hackberry Consol. Mng., Ariz.....	1063
Government vs. corporations. Editorial	1102	Hackberry Silver Mng., Ariz.....	661, 812
Government's handicap. Editorial	1188	Hadfree, Sir R. ....	1104, 1138
Governor, Colo.	661, 1109	Hagar, E. N. died.....	304
Grable, L. A. property, Ga.	15	Hague, W. Career and death.....	*148
Grading graphite, Ala.	282	Haig, Sir D. ....	896
Granby Consol., B. C.	662, 812, 1064, 1110	Haight, W. R. ....	812
—Annual rept.	250	Haley, E. J. ....	927
—Dividends	1019	Hale, F. A., Jr. Manganese, Clark Co., Nev.....	*775
—Production	252	—Ore deposits, Yellow Pine, Nev.....	455
Grand Central, Utah	38, 576, 814	Hale, G. E. Organization of research work.....	1136
—Dividends, 1917	160	Hales & Symons, Calif.....	354
By months	32, 843	Haley, D. F. Oil-flotation patent.....	548
Grand Island Mng., Ariz.	1108	Halifax, Nev., Production 222, 356, 770, 1026,	
Grand Pacific Cop., Ariz.	898	Halifax Shipbuilders, Ltd.....	1064
Grand Prize, Nev.	1064	Hall, F. W. ....	597
Grandma Consol., Nev.	982, 1064, 1150	Hall Tunnel, Colo.....	355
Granite Gold Mng., Colo.	447, 487, 703, 855, 1109	Halsey, F. A. Metric system.....	1013
Granite Poorman Mine, B. C.	83	Hamilton, E. H. ....	1106
Grant, F. L.	899	Hamilton, F. ....	937, 1107
Grant, G. P.	881	Hamilton, S. H. ....	351
Grant, W. H.	859	Hamlet Mng. & Milling, Colo.....	81, 769, 1109
Graphite, Ala.	*281, 436	Hammond, H. O. ....	614
Ceylon, export		Hammond, H. Y. Yeatman Telegram.....	596
Ceylon vs. Alabama		Hampden-Cloncurry Cop. Mines, Ltd., Aus.....	952, 1100
Grading		Hampshire, Minn.....	
Imports protec.		Hanck, H. O. ....	1062, 1109
List of companies		—Production.....	263, 487, 617, 900
Madagascar		Hancock, R. T. ....	937
N. Y. 1917 review		—Heap leaching.....	882
Ont., 1917 review		Haney, M. Manganese mng., Va.....	*724
Graphitic ores, Cyaniding		Harford-Shepherd, Ark.....	1149
Graphite Products Corp.		Hang, E. L. ....	852
Graphite—Spain, deposits		Hangers—Space determination chart.....	473
Sweden		Hanke, H. O. ....	1061
—U. S.		Hanna, M. A. Co., Mich.....	74, 177, 575, 770
Import restrictions		Hanna, W. J. ....	351, 528
1917 review		Hanno Ore Co., Minn.....	177
World production, 1917	1079	Hansen, S. C. ....	917
Grass Valley Consol. Gold mines, Calif.	81, 1025	Hansen, H. A. ....	896
Grass Valley Deen Mines Corp.	37	Hardenberg, Calif.....	1149
Hardness test, tube-mill pebbles.		Harder, E. C. Brazilian iron.....	1002
Hardshell, Ariz.		—Ander Cop. Co.....	137
Hardy, C. Molybdenum		Harding, J. E. ....	1022
Tungsten ore market.		Harding, W. P. G. ....	887
Harmon, B. G.		Hardinge Conical Mill Co.—Miami Cop. mill data.....	484
Harms, E.		Hardinge, H. W. ....	1139
Harrington, C. L.		Hardinge mill tests, Miami.....	426
Harrison, E. I. died.			
Hart, C. E.			
Hartzell, L. M.			
Harwood, T. J.			
Hassan, A. A.			
Hassan, E. A.			
Hastings, F. B. Dietary for miners.			
Hatch, F. A.			
Hatch, H. B. Gold mines speculation.			
Hatch, L. W.			
Haulage, Eagle-Picher			
Mesabi Range			
St. Joseph, Mo.			
—Tractor in			
Underground, Joplin			
Hauser, E. Corrosion of electrodes.			
Hauser, H. A.			
Hauy, Abbé R. J. celebration.			
Hawkes, A. W.			
Hawley, F. G. Sulphur analysis.			
Haycock, E. died.			
Hayden, C.			
Hayden Devel., Ariz.			
Hayes Mug., Ida.			
Haynes, E. Stellite.			
Haynes Stellite Co., Ida.			
Hayward, M. W. Molybdenum mng., Colo.			
Haywood, W. D.			
Hazel, Calif.			
Headframe, Ariz. Hercules.			
—Union mine, Nev.			
Headlight, Calif.			
Healy, R. L. Powder blasting, Perseverance, Alaska.			
Heap-leaching. See "Leaching."			
Heater, Steel jacketed electric.			
Heaton's Annual Commercial Handbook.			
Heewood, Fed. Malay States.			
Hebbard flotation machine.			
Heberlein, K. B.			
Hecla Mng., Ida.			
—Cementation.			
—Dividends, 1917			
By months			
—Stoping methods			
By months			
Hedley, B. C.—Dividends, 1917			
By months			
Heller, Steel jacketed electric.			
Heaton's Annual Commercial Handbook.			
Hedwood, Fed. Malay States.			
Hebbard flotation machine.			
Heberlein, K. B.			
Hecla Mng., Ida.			
—Cementation.			
—Dividends, 1917			
By months			
Hedley, Steel jacketed electric.			
Heaton's Annual Commercial Handbook.			
Hedwood, Fed. Malay States.			
Hebbard flotation machine.			
Heberlein, K. B.			
Hecla Mng., Ida.			
—Cementation.			
—Dividends, 1917			
By months			
Hedley, Steel jacketed electric.			
Heaton's Annual Commercial Handbook.			
Hedwood, Fed. Malay States.			
Hebbard flotation machine.			
Heberlein, K. B.			
Hecla Mng., Ida.			
—Cementation.			
—Dividends, 1917			
By months			
Hegler, W. German barbarity.			
Hiaawatha, Colo.			
Hicks, H. L. Mechanical tampers.			
Hidden Lake Mine, Mont.			
Higbee, F. G. Geometry.			
Higgins Mng., Ariz.			
High Speed Steel Alloys, Ltd.			
Highland Mary, Colo.			
Highways, Pacific Coast.			
Hill Annex, Minn.			
Hill, C. W. Determining lead by spectroscope.			
Hill Mine Co., Minn.			
Hill Gold, Ont.			
Hill, J. M.			
Hill Top Extent., Ariz.			
Hines, D. M.			
Hines, J. I. D.			
Hines, P. R.			
—Ball-milling			
Hock Hocking, Colo.			
Hodgkinson, H. H.			
Hodgson, J. P. Shift boss.			
Hofman, H. O. Metallurgy of lead.			
Hoist, Nordberg electric.			
Hoisting accidents, Mo.			
Apparatus, Comstock.			
—Consol. Interstate-Callahan			
—East, Siberia.			
—Ropes, Formula.			
Service and care.			
Holden Mng. & Milling, Nev.			
Hoderer, G. B.			
Holland, A. A.			
Holland, E. died.			
Holland, Th. embargo.			
Hollenbaugh, G. O.			
Hollinger Consol., Ont.	84, 264, 400, 960, 1087		
—Annual report			
Holliston mines, Colo.			
Holloway, G. T. Valuation of manganese ores	1163		
Holly Sugar Co.			

Page	Page
Holman, C. V. ....	351
Holmes, J. A., Safety Assoc. ....	930
Home Builder, Ida. ....	1062
Home Guards, Mont. ....	485
Home Lode Gold Mng., S. D. ....	83
Home Oil, Ariz. ....	1063
Homer, Colo. ....	307
Homer, Ont. See "Temiskaming." ....	34, 83, 576, 870
Homestake Mng Co., S. D. ....	574
—Annual report ....	160
—Dividends, 1917	By months. ....
—Production ....	32, 260, 440, 656, 843, 1019
—Wage increase ....	397
Honduras Mng. Co. ....	982
Honduras Rosario Mng. Co. ....	122
Hongkong. See also "China." ....	122
Hongkong metal trade ....	583
Honnold, W. L. ....	937
Hood, B. B., U. S. metals laboratory. ....	451
Hoosier, Colo. ....	1193
Hoosier, Nev. ....	618
Hoover, H. C. See also "Food Admin." ....	28
—Buying monopoly ....	801
—Favors Minerals Admin. ....	689
—Letter to A. I. M. E. diners. ....	428
—Nat. Inst. medal award ....	218
—On saving ....	321
—Sen. Reed's investigation ....	26
Hoover, T. J. Horwood flotation process. ....	742
Hopkins, J. G. ....	761
Hopkins, P. ....	1106
Hornaday, W. D. Texas School of Mines. ....	994
Hornsby, J. A. ....	930
Horseburgh, J. ....	937
Horse Mountain Cop., Calif. ....	1192
Horwood flotation process. ....	742
Hoskin, A. J. ....	174
Hotchkiss, W. O. ....	1035
Houghton Cop., Mich. ....	355, 618, 1026, 1149
Houle, A. ....	261
Housing, Industrial Editorial. ....	1102
Housing problem in war industry. ....	608
How Draper brought out the platinum. ....	510
Howard, L. O. ....	1146
Howe, H. M. ....	1137
—Erosion of guns. ....	427
Howley, J. R., died. ....	174
Hubbard, R. S. ....	927
Huddleston, C. ....	937
Hudson Bay, Ont. ....	264, 400
Hudson, Colo. ....	813
Hudson, W. B. ....	1108
Hughes, H. W. Text book of coal mng. ....	1936
Hughes, J. See "Amer. Iron & Steel." ....	1936
Hughes, W. M. ....	952
Hull Rust, Minn. Steam-shovel mng. ....	403
Humboldt, Colo. ....	341, 1193
Humboldt Consol. mines, Ariz. ....	981
Humphreys, A. C. ....	891
Hunka Tin. Poem. ....	935
Hunner, H. H. ....	896
Hunt, F. F. Gold cathodes. ....	162
Hunt, W. W. ....	962, 1012
Huntley, L. G. ....	1146
Hurd, R. ....	572
Hurley, E. N. See also "Shipping." ....	754
—Shipping Bd. achievements. ....	755
Hurricane, Colo. ....	176
Hurt, J. ....	1012
Huskinson, F. Train alarms and lights. ....	221
—Trolley cut-out. ....	291
Hutchins, J. P. Bolshevik smelterman's diary. ....	468
—Drift-gravel mng. Editorial. ....	859
—Russia. ....	126
Hutton, F. R., died. ....	1860
Hydroelectric power for mng., Yavapai, Ariz. ....	1139
Hydro-Metallurgical, Calif. ....	399
Hydrochloric solution for deposition removal. ....	726
Hygienics for lead workers. ....	284
Hypotheek Mng. & Mfg., Ida. ....	575, 855
I	
Ida Blende, Wis. ....	178
Ida May, Colo. ....	1149
Ida May, Minn. ....	270
Idaho Continental, Ida. ....	1109, 1193
Idaho, Labor. ....	175, 530, 768, 1148
—Law	
Idaho Mica, Wash. ....	1150
Idaho M. R. T. & T. Colo. ....	1025
Idaho—Minerals, 1917 prod. ....	306
—Mining, 1917 review. ....	145
Idaho mng. industry. ....	766
Idaho-Nev. Ida. ....	263
Idaho School of Mines. ....	445
Idaho, Tungsten. ....	1062
Ignition, Fuse, improved method. ....	1046
Illinois Geol. Survey rept. ....	766
Illinois—Petroleum fields	
Cementation methods. ....	1080
Illinois Steel Co. ....	795
Illinois Univ.—Fellowships. ....	199
Illinois Zinc Co. ....	597
Imperial Lead, Utah. ....	38, 308
Imperial Mng., Colo. ....	355
Imperial Oil, Ltd., Canada. ....	36
Imperial tie-tamper. ....	1048
Imports control 390, 435, 649, 689, 690, 840, 1011	
Imports restriction affects pyrites and graphite. ....	608
Incline top slice stoping. ....	246, 279, *464
See also "Stoping."	
Income tax. See "Taxation." ....	1057
Increase in R.R. rates. Editorial. ....	1057
Increased cost of living. Editorial. ....	807
Independence Mng., Ark. ....	446, 574, 813, 1149
Independent Mine Owners & Prod. Assoc. ....	1062
Independent Oil Prod. Assoc., Calif. ....	979
Index, Colo. ....	355, 703, 1064, 1106
Index, Mining. ....	41, 267, 442, 697, 850, 1020
India—Iron ore deposits. ....	1118
—Manganese export analyses. ....	327
Indian Chief, Okla. ....	1194
Indian Peninsula Mng., Ont. ....	935
Indiana, Colo. ....	661, 1063
Indiana Gold Mng., Calif. ....	897
Indiana, Mich. ....	487, 575, 856
Indiana Steel Co. ....	795
Indo-China. See "Tonkin." ....	1063
Industrial Accident Comm., Calif. ....	853
—Safety rules for gold dredges. ....	1061
Industrial co-operation after the war. ....	33
Industrial dislocations. Editorial. ....	764
Industrial efficiency. ....	891
Industrial housing. Editorial. ....	1102
Industrial safeguards, Gt. Br. ....	638
Industrial unrest, Gt. Britain. ....	1103
Industrial Workers of the World, 305, 445, 938, 980	
—Bisbee deportations. ....	1055
Industries, Germany. ....	803
Industries, Non-essential. ....	435, 649
—Editorial. ....	480
—Financial American list. ....	607
Influence. J. D. Ryan on. ....	1019
Infusorial earth, B. C. ....	1062
Ingalls, W. R. ....	761
—Address at Yeatman presentation. ....	*595
Brief for zinc smelters. ....	616
—Liberty loan messages Photo. ....	622
—Minerals Admin. testimony. ....	970
Mines control. ....	657
Zinc metallurgy. ....	96, 552
Ingersoll-Rand Co. —"Little David" grinder. ....	*472
Ingersoll, G. ....	1012
Ingersoll, S. D. ....	814
Injury to blasting employees. ....	327
Innes, M. Quicksilver. ....	110
Quicksilver in Calif. ....	52
Inspiration Consol. Cop. Co. ....	220, 1107
—Annual report. ....	1092
Dividends. ....	260, 843
Flotation practice. ....	717
Production, 252, 354, 574, 769, 806, 898, 959, 1101, 1149	
—War gardens. ....	839
Institute of Metals, London. ....	572
Institution of Mng. & Metallurgy. ....	34
Papers. ....	1163
Instructions for flotation operators. ....	878
Instrument stand. ....	*247
Insurance, Naval & military. ....	260, 734
Intermountain, Mont. ....	487
Intermountain rate decision. ....	296
International Agric. Corp. ....	*284
International Molybdenum, Ont. ....	881
International Nickel Co. ....	31, 84
—Annual report. ....	1180
—Capital increase. ....	814, 898
Dividends, 1917. ....	160
By months. ....	32, 440, 656, 1019
Taxes. ....	429
International Portland Cement Co. ....	1110
International Smg. Co. ....	142
Interstate-Callahan. See "Consolidated." ....	1120
Interstate Commerce Comm.—Intermountain decision. ....	290
—Mineral freight reclassification. ....	297
Interstate Iron Co., Minn. ....	34
Inventions Board. ....	930
Investing, Gold mng. ....	430
Inyo Co., Calif., map. ....	1107
Inyo Silver-Lead Synd. ....	813
Iodide copper method with sodium fluoride. ....	1170
Iola, Ark. ....	1025
Iowa Cop., Utah. ....	308, 576, 1064
Iowa Geol. Survey rept. ....	7766
Ireland, Calif. ....	81
Iridium commandeered. ....	969, 1107
—Editorial. ....	934
Irish Creek, Va. Tin deposits. ....	*5
Iron, Australia, deposits. ....	1119
Iron, Austria-Hungary. ....	373
Iron Blossom, Utah. ....	356, 532, 856, 1194
—Dividends. ....	222, 843
—Wage payment. ....	1107
Iron—Brazil Deposits. ....	1002
—Canada. ....	939, 980
—Deposits. ....	590
—Steel. ....	688, 1062
Iron Cap, Ariz. ....	220, 617, 998
—Dividends, 1917. ....	160
By months. ....	32, 260, 440, 656, 843, 1019
Iron, China, deposits. ....	1003
Iron Clad Joint Co. ....	*472
Iron—Cuba, deposits. ....	1002, 1123
—Germany. ....	809
—Greece, deposits. ....	1122
—India, deposits. ....	1118
—Italy. ....	356
Iron King, Utah. ....	222, 704, 770, 1110, 1150
Iron, magnetic concentration. ....	*912
Lake Superior, 1917. ....	72
Iron Mask, Colo. ....	37, 355, 487, 531, 661
Iron—Mexico, deposits. ....	1123
—Minn. ....	352, 965, 1024
Newfoundland, deposits. ....	1118
Norway Deposits. ....	441
—Ont. Analyses. ....	1087
Report of Advs. Coun. Dept. of Sci. & Indust. Res., Gt. Br. ....	*1117
—Price. ....	661
—Historical. ....	1145
Russia, deposits. ....	1119
South Afric., deposits. ....	1118
Spain, analyses. ....	1122
Biscayan Prov. ....	421
Iron (Cont'd.). ....	1123
—Sweden, deposits. ....	1002, 1119
1917 production. ....	691
Imports and exports. ....	789, 1171
Tunis, deposits. ....	1122
—U. S. deposits. ....	1123
Iron and steel, production. ....	72
Situation. ....	475
1917 review. ....	74
Import restrictions. ....	649
Pig. ....	72, 395, 932, 1142
1917. ....	668
Price. ....	1148, 1184
U. S. Steel report. ....	794
Imports and exports. ....	303
Ironton Portland Cement, Ohio. ....	400
Irtysh, Russia. ....	38
—Annual meeting. Urquhart's address. ....	275
Irvin, D. F. Mill mechanism in nitrate leaching. ....	*987
Irving, J. Leaching. ....	230
Irving Power plant. See "Ariz. Power." ....	2
Isabel Dredging Co., Calif. ....	2
Iste Royale Cop. Co.—Annual report. ....	1094
—Dividends. ....	260, 843
—Production. ....	307, 487, 814, 1026, 1149
—Various notes, 37, 177, 221, 355, 487, 530, 532, 855, 1062, 1109	
Italy, Iron. ....	256
—Minerals, production. ....	331
—Sulphur embargo. ....	139
Ivanhoe, Wash. ....	1110
J	
J. & C. Mng., Ark. ....	661
Jack, R. L. Geology of Moonta and Wallaroo District. ....	*527, 766
Jack Waite, Ida. ....	399
Jacket, Nev. ....	222, 264, 308, 356, 448, 576, 662, 696, 700, 761
Jackson, D. C. ....	340
—Directs powder plants. ....	340
Jackson, G. J., died. ....	760
Jackson, R. ....	899
Jacobson, B. S. Powder in open-cut blasting. ....	365, 601, 1130
Jager, O. E. ....	261
Jameson, J. W., vs. Producers' Transportation. ....	615
Janney flotation machine, 710, *714, 715, 717, 720	
Japan—Money. ....	748
—Weights and measures. ....	1075
—Zinc. ....	1059
Jason Lease, Colo. ....	855
Jean, F. ....	836
Jefferson, Okla. ....	1084, 1194
Jenkin, A. ....	218
Jenkins, O. P. Two manganese deposits, North. Wash. ....	1082
Jennings, H. Gold industry and standard. ....	867
—Editorial. ....	864
Jennings, S. J. ....	596, 811
—Liberty loan message. Photo. ....	622
Jerome Central Mng., Ariz. ....	1040
Jerome Cop., Ariz. ....	220, 855, 1024
Jerome Del Monte, Ariz. ....	1114
Jerome Mng., Ariz. Conger mine. ....	354
Jerome-Portland Cop., Ariz. ....	1114
Jerome Superior, Ariz. ....	940, 1063, 1108, 1192
Jerome Verde Mng., Ariz. ....	769, 812, 1024, 1108, 1114
Jerome Victor Extent, Ariz. ....	307
Jerusha Gulch, Mont. ....	941
Jessie, Colo. ....	1109
Jessup, D. W. Analysis of bismuth in lead bullion. ....	603
Jigs, "Rougher" and "cleaner". ....	730, 741
Jim Butler Tonopah Mng., Nev. ....	982, 1147
—Annual report. ....	799
—Dividends. ....	440
—Production, 38, 178, 222, 356, 488, 532, 618, 662, 704, 770, 814, 856, 900, 942, 982, 1026, 1064, 1101, 1105	
Jim Crow, N. M. ....	264
Jimenez, C. P. Estadistica minera. ....	1105
Joan, Minn. ....	177
John Brennan, Wis. ....	177
Johnson, A. F. ....	1145
Johnson, C. M. Zirconium. ....	331
Johnson, J. B. ....	444
Johnson, J. E. Jr. ....	1002
—Blast furnace. ....	1105

Page	Page
Judge Mng. & Smg., Utah, 83, 356, 448, 488, —Annual report . . . . . 576, 1110	Kyle, T., died . . . . . 552
—Dividends, 1917 . . . . . 160	Kyshtim Corp., Ltd.—Mines confiscated . . . . . 388
By months . . . . . 32, 843	L
Jumbo Extent. Mng., Nev.—Annual rept. . . . . 251	La Plaisance, Colo. . . . . 703
Jump drills, Yoke . . . . . 582	La Rose Consol., Ont. 356, 400, 488, 618, 704,
June Bug, Colo. . . . . 37, 703	814, 1150
Juneday, Calif. . . . . 354, 899	575, 770
Juno, S. D. . . . . 982	La Salle, Mich. . . . . 399, 704, 1064
<b>K</b>	—Production . . . . . 307, 487, 814, 1026, 1149
K. & K. Ark. . . . . 306	La Vasseur, C. . . . . 937
K. & K. flotation machine . . . . . 711, 718, 746	Labbe, C. Truing crankpin . . . . . *246
K. and M. See "Continental." . . . . . 264	Labor. See also "Workmen's Compensation."
Kaiser, F. H. See Kingdon, F. H. . . . . 264	—Ala. . . . . 854
Kanaka, Calif. . . . . 899	—Ariz. . . . . 1107, 1147
Kanoak Metals, Mo. . . . . 616	—Bonus system . . . . . 461
Kansas City-Nev. Consol., Nev. . . . . 814	—B. C. . . . . 525
Kansas City Rfg., Kan. . . . . 821	—Butte . . . . . 939
Kansas, Petroleum industry . . . . . 817	—Calif. . . . . 305
Kaolin, Ga. . . . . 14	—Canada . . . . . 891, 1104
Kapi Mng. & Mig., Colo. . . . . 1025	—Community interest development . . . . . 830
Karamoid Mfrg. Co. . . . . 610	—Defense Coun. program . . . . . 212
Katanga. See "Union Miniere." . . . . . 1110	—France . . . . . 636
Katie, Mont. . . . . 1110	—Gold production and . . . . . 873
Kaufman, L. Mineral right holdings . . . . . 219	—Gt. Br. . . . . 803
Kay Cop., Ariz. . . . . 307, 702	—Ida . . . . . 175, 530, 768, 1148
Kay, G. F. . . . . 766	—Indo-China . . . . . 317
Keck, W. M. . . . . 1022	—Liberty and . . . . . 739
Kee, H. A. Cafeteria, Kerr Lake . . . . . *946	—Mexico, wages problem . . . . . 557
Keeley, Ont. . . . . 982	—Mo. . . . . 35, 353, 939
Keeney, S. H. . . . . 981	—Mont. . . . . 445, 485, 573, 616, 660, 1023, 1055
Keeping down the costs. Poem . . . . . 613	—Oliver Iron Mng. policy . . . . . 1168
Keener Tunnel, Colo. . . . . 703	—Ont. . . . . 486, 616
Kehoe, H., died . . . . . 528	—Russia . . . . . 468
Keith, D., died . . . . . 810	—South Af. . . . . 1042
Keith, E. W. . . . . 937	—Wage schedule . . . . . 3
Kelbner, Okla. . . . . 1026	—Strike causes analyzed . . . . . 562
Kellaway, F. G. . . . . 840	—Transvaal data . . . . . 130
—Minerals-control testimony . . . . . 1052	—U. S. See also "National Labor Bd." . . . . . 1102
Kelley, C. F. . . . . 484	Babson on . . . . . 433
Kellogg, R. S. . . . . 891	Editorials . . . . . 347, 693, 695
Kelly, A. L. . . . . 981	Labor Dept. . . . . 295
Kelly Bill . . . . . 701	Labor power . . . . . 296
Kelly filters . . . . . *714	Railroads . . . . . 928
Kelly Mng. Corp., Calif. . . . . 399	Editorial . . . . . 935
Kelly Tunnel, Colo. . . . . 899	Refineries lose men to govt . . . . . 432
Kelso, A., died . . . . . 810	Employment zones . . . . . 688
Kemp, J. F. . . . . 810	May use Mexican labor . . . . . 1182
Kemp, J. T., marriage . . . . . 261	Nat. War Bd. program . . . . . 686
Kennan, C. T. . . . . 1062	Shipyards . . . . . 27
Kennecott Cop. Corp., Alaska, 80, 940, 978, 1024, 1063	Skilled enlisted men returned . . . . . 1096
—Dividends, 1917 . . . . . 160	Use Federal Bureau . . . . . 1182
By months . . . . . 32, 656	Statistics . . . . . 482
—Production . . . . . 1101	Unrest. Editorial . . . . . 417
By months . . . . . 32, 656	Utah . . . . . 445, 615, 811, 853
—Production . . . . . 1101	Wage increase . . . . . 352
Kennedy, A. T. . . . . 304	—Utah Cop. . . . . 768
Kennedy, Calif. . . . . 221, 768	—Wages problem. Editorial . . . . . 30
Kennedy, J. E. Zinc, Wis. . . . . 69	Chart, 1914-1917 . . . . . 568
Kenosha, Calif. . . . . 1063	—War to transform unionism . . . . . 1137
Kentex, Okla. . . . . 532, 770	Labor's wastes. Editorial . . . . . 214
Kentucky oil fields . . . . . *781	Lackawanna, Colo. . . . . 307, 399, 703, 899
Kentucky, Phosphate . . . . . 932	Laclede Lead & Zinc, Okla. . . . . 82, 618, *733
Kerosene distillates—Motor fuel from . . . . . 425	Laco-Philips Co. . . . . 932
Kerr, D. C. Minerals Admin. Senate testi- mony . . . . . 1011	Laforgue, C. L., died . . . . . 810
Kerr Lake, Ont. . . . . 178, 488, 1087	Lake, Colo. . . . . 176
—Annual report . . . . . 250	Lake Milling, Smg. & Rfg., Mich. 82, 177, 941, 1062
—Cafeteria . . . . . *946	Lake Shore Mines, Ont. 84, 308, 576, 856, 900, 1064
—Dividends, 1917 . . . . . 161	—Financial statement . . . . . 356
By months . . . . . 32, 656	Lake Side mill, Calif. . . . . 482
—Production . . . . . 222, 264, 448, 618, 704, 856, 1026	Lake Superior dist. . . . . 353, 575
Ketchum, M. S. . . . . 484	—Centralized control . . . . . 919
Keweenaw Assoc., Mich. . . . . 858	—Iron ore, 1917 . . . . . 72
Keweenaw Cop., Mich. . . . . 447, 572	—Copper industry, 1917 . . . . . 57
Key, A. O. Mineral prod., South Af. 1917 . . . . . 1042	—Shipments . . . . . 965
Keyes, C. R. . . . . 898	—1917 review . . . . . 175
Kyreneon, Calif. . . . . 354, 574, 768, 813	Lakes, A. . . . . 700
—Semi-annual report . . . . . 398	Lamb, M. R. Marketing Bolivian tin . . . . . 1014
Keystone Con. Mng., Ariz. . . . . 854	Lambourne, G. W. . . . . 1061
Kidd, J. W. . . . . 294	Lammers, R. O. . . . . 856
Kilgore Mng., Ark. . . . . 769	Lamoreaux, W. F. . . . . 810
Kilns, Magnesite . . . . . *665	Lanson, H. H. . . . . 889
Kimberley Gold Mng. Co. . . . . 23	Lanark Mng., B. C. . . . . 982
Kinder, H. Ammo. molybdate recovery . . . . . 249	Land, G. . . . . 1022
King Placer Consol., Ariz. . . . . 80	Land office adjudications . . . . . 232
Kingdon, F. H. . . . . 896	Landers, W. H. Photo . . . . . 786
Kingston Mng., Minn. . . . . 575	Landgrebe, K. . . . . 1106
Kirk vs. Olson . . . . . 583	Lane, F. K. Imports control . . . . . 435
Kirkland Lake Gold Mines, Ont. 36, 38, 178, 448, 1064, 1087, 1110	—Miner control . . . . . 657
Kirkland Porphyry, Ont. . . . . 36, 264, 400, 814	—Oil land leasing bill . . . . . 895
Kistler-Stephens, Wis. . . . . 178, 1150	—Potash leasing regulations . . . . . 761
Kitson, H. W. . . . . 1106	Laney, F. B. . . . . 810
—Mng. districts of Joplin . . . . . *359, *411, *727, *1153	—Geology, N. C. . . . . 350
Klamath River Dredging, Calif. . . . . 575	Lang, J. H. Tin market . . . . . 60
Klamath River dist., Calif. . . . . 354	Lang lay rope . . . . . 992
Kleinsorge, Calif. . . . . 940	Larkin, P. . . . . 896
Klepinger, J. . . . . 1060	Larkin, W. H. Cementation . . . . . 585
Knaben district, Norway . . . . . 500	Lars, W. S. Branch-raise sub-level caving . . . . . *503
Knickerbocker A. K. . . . . 304, 978	Larson, A. G. . . . . 700
Knight, C. Riveting record . . . . . 969	Las Vegas manganese field, Nev. . . . . *775
Knight-Christensen Metall., Utah . . . . . 979	Lass, W. F. Ferrochrome situation . . . . . 244
Knight, L. A. Thiel knot . . . . . 158	Latham-Simonds, Calif. . . . . 1192
Knopf, A. Economic geology . . . . . 105	Laucks, I. F. . . . . 444
—Zinc carbon in lead-silver . . . . . 256	Lauer, A. W. . . . . 107
Knots . . . . . 158	Laurier, Wash. . . . . 662
Knowles, W. H. . . . . 937	Law. See also "Workmen's Compensation."
Knownnothing, Calif. . . . . 221	—B. C. . . . . 702, 854, 939
Kohler, E. P. . . . . 700	Law, C. E. . . . . 1190
Kokomo Mng., Colo. . . . . 355	Law—Calif. Producers Transport vs. Jameson . . . . . 615
Koir, India—Air blast in . . . . . 957	—Colo. mine timber . . . . . 701
Komat Leg., Colo. . . . . 661	Law decisions—Anti-blacklist law, Ariz. . . . . 1107
Komata liners . . . . . 245	—Butte & Sup. vs. Minerals Sep. . . . . 962, 974, 976
Kongsberg silver mines . . . . . 591	—Conclusiveness of dept. findings . . . . . 583
Koster, J. W. Permissible explosives . . . . . *1105	—Employer's liability for defective steam shovel . . . . . 425
Kraut flotation machine . . . . . 746	—Extra lateral mng. rights . . . . . 273
Kreislinger, H. Combustion of coal . . . . . *1105	—False representation . . . . . 1147
Krejci, M. W. . . . . 1146	
Krist-Thompson, Ont. See "Thompson." . . . . . 369	
Krusch, P. Low grade minerals, Germany . . . . . 288	
Kunz, G. F. Platinum . . . . . 288	
Kwangtung, China—Wolframite . . . . . 24	
	Law Decisions (Cont'd.)
	—Fraud in "cost-plus" contracts . . . . . 754
	—Injury to blasting employees . . . . . 327
	—Insurance claims . . . . . 573
	—Land office adjudications . . . . . 233
	—Negligent hoisting engineers . . . . . 187
	—Potash lands case . . . . . 907
	—Ross vs. Burrage . . . . . 1185
	—Scope of miners' employment . . . . . 373
	—Silver apex law . . . . . 1147
	—Sufficiency of assessment work . . . . . 630
	—Supreme Ct. on income tax . . . . . 1097
	—Utah mineral land . . . . . 252
	—Valuing mining property . . . . . 543
	Law—France . . . . . 1062
	—Ida . . . . . 255
	—Wash . . . . . 147
	Lawmaking for engineer . . . . . 1138
	Lawn Hills, Aus . . . . . 939
	Lawrence, W. . . . . 1106
	Laws, E. . . . . 700
	Lawton Mng., Kan . . . . . 770
	Lawyers, Kan . . . . . 981
	Laying, N. R. . . . . 1012
	—Antimony, Nev . . . . . 797
	Le Chatelier, H. Refractory properties of silica . . . . . 505
	Le Duc Mng., Calif . . . . . 354
	Leaching—Acidulation solution table . . . . . 1098
	—Chalcocite . . . . . 552
	—Heap . . . . . 339, 882
	Costs . . . . . 226, 231
	—Copper ores . . . . . 225, 430
	—Nitrates, Modern mill mechanism in . . . . . 987
	—Plant, Tyrone, N. M. . . . . *223
	Lead, Algeria . . . . . 1174
	Lead & Zinc Co., Wash . . . . . 704
	Lead and zinc, Joplin, 1917 review . . . . . 70
	Lead—Ark., field . . . . . *313
	—Bismuth analysis in . . . . . 603
	Editorial . . . . . 1143
	—Canada, 1917 . . . . . 589
	Determination by spectroscope . . . . . 163
	Flotation . . . . . *707, 741
	Market, 1917 . . . . . 61
	Vogelstein & Co.'s review . . . . . 216
	Metallurgy, 1917 review . . . . . 93
	—Mo., 1917 review . . . . . 65
	—Ont . . . . . 1087
	—Production, 1917 . . . . . 63
	—U. S. production, 1913-17 . . . . . 61
	Imports and exports, 17, 303, 424, 761, 1003, 1141
	Lead, white. See "White."
	Lead workers, hygiene . . . . . 384
	Leadville-Ariz., Ariz . . . . . 812
	Leadville district—Production, 1917 . . . . . 175
	Leadville Unit, Colo . . . . . 855
	Leaver, E. S. Copper determination in oxi- dized ores . . . . . 552, 645
	Ledyan, L. W. . . . . 444, 614, 787, 1022, 1190
	Lee Mountain, Mont . . . . . 264, 941
	Leggett, T. H. . . . . 596
	Legislation. See "Law."
	Lehi Tintic, Utah . . . . . 618
	Lehigh Coal and Navigation . . . . . 190, 840
	Leith, C. K. See also "Mineral Imports Comm." . . . . . 351, 649, 841, 889, 1186
	Length of service, hoisting ropes . . . . . 992
	Lenora, Okla . . . . . 770
	Let us not be too late in Russia. Editorial . . . . . 1144
	Levack, Ont . . . . . 961
	Lever bill . . . . . 485, 1107
	Leviathan, Ariz . . . . . 1149
	Lewis Mng. & Leasing, Colo. 81, 263, 399, 617, 1063
	Lewisohn, A. . . . . 761
	Lexington, Mont. See also "Anaconda." . . . . . 529
	Li, K. C. Antimony in 1917 . . . . . 89
	Liberty Bell, Colo . . . . . 176, 399, 447, 898, 941
	Liberty Lead & Zinc, Ark . . . . . 80, 317
	Liberty and labor . . . . . 739
	Liberty Loan, 611, 647, 686, 716, 719, 739, 760, 780, 798, 974, 1061
	Cartoons . . . . . (facing) *579, 650, 692
	Editorial . . . . . 847
	Message to mng. industry . . . . . 621
	Mng. companies subscriptions . . . . . 761, 806, 845
	Editorials . . . . . 893, 894
	Montana companies . . . . . 898
	Price of shameful peace . . . . . 644
	St. Joseph Lead . . . . . 598
	Statistics . . . . . 838
	United Verde . . . . . 892, 948
	Liberty Mng. & Lsg., Colo . . . . . 617, 769, 1109
	Liberty Mng. & Reduct., Colo . . . . . 1064
	Liberty, Nev . . . . . 488
	Liddell, D. M. . . . . 351
	J. Utah Cop. paintings . . . . . *18, *19
	Light breaks. Editorial . . . . . 893
	Light for drafting room . . . . . 516
	Lightfoot Oil & Mng., Okla . . . . . 1026, 1110
	Lighting—Laco-dalite . . . . . 932
	Lightner, Calif . . . . . 1025
	Lignite briquetting plant, Canada . . . . . 898
	Lignite investigation, Bur. of Mines . . . . . 24
	Lime, U. S., 1917 . . . . . 914
	Lincolnshire iron ore deposits . . . . . 1117
	Lincolville Lead & Zinc, Okla . . . . . 1064
	Lindberg, C. O. . . . . 1012, 1190
	Lindeman, E. Iron ore, Canada . . . . . 1350, 1527, 1766
	Lindgren, E. W. Swedish iron ore . . . . . 1002
	Liners, mill . . . . . 460
	Link Belt Co . . . . . 245, 713
	Lithium hydroxide . . . . . 597
	Little Corkscrew, Colo . . . . . 1063
	Little Cottonseed Transp., Utah . . . . . 264, 979
	"Little David" grinder . . . . . *472
	Little Giant, Ariz . . . . . 898

Page	Page	Page			
Little Giant, Colo.	703	McLean, A. W.	887	Maps—Alabama, Graphite	261
Little Martha, Mo.	532, 814	McLeish, J. Mineral prod. of Canada	513, 588	—Calif., Petroleum	573
Little Piatte, Wis.	1150	McMahon, H. G.	1012	—Chile, Potash	674
Little Rabbit Iron, Minn.	177	McMartin, J., died	767	—Colo., Mng. and Geol.	498
Litzen, W. W.	1106	McMaster, R. H.	484	Petroleum	11
Livermore, T. L., career	*234	McMurtrie, D. C. Reconstructing the crippled		—Ill., Petroleum and gas	*182
—Died	174	soldier		—Joplin, Okla.-Kan. section	731
Living costs	519	McNair, F. W.	1190	Mineral areas	*360
—Editorials	393, 807	MacNamara, Nev., production	38, 517, 222,	Kan., Petroleum	821
Lixiviation plant	*989	356, 488, 532, 618, 662, 704, 770, 814, 856,	—Ky., Petroleum	781	
Lloyd, G. C. Iron ore report	1117	900, 942, 982, 1026, 1064, 1101, 1150	—Mo. mng. district	1155	
Lloyd, J. W.	1194	MacNaughton, J. Lake Superior Copper, 1917, 57	—Nev., Yellow Pine dist.	455	
Loader, Bucket	*473	McQuigg, C. E. Draft gage	*292	Norway, Molybdenum	499
Loading board safety device	*833	Macquisten tube in flotation		—Pintados Salar, Chile, Potash	677
Loading, skip—Cal. & Hec.	353	—Morning, Ida	707	Tin deposits	5
Loafing and malingering	549	Macrae, G. B., died	1060	—Wash., Magnesite	668
Locey Fabst Gold Mng., Ariz.	1114	Madagascar, Graphite	907	—World iron and steel economic map	1121
Lochard, A. Zinc smelting, Tonkin	316	Madagascar Graphite, Ala.	531	Marcussen, Calif.	486
Lock washer	203	Madagascar Minerals exports	683	Marine Corps. Poster and editorial	1143
Locke, C. E.	174	Magazines, Technical, wanted for Red Cross	1175	Mariposa, Calif.	81
Locomotives ordered	887	Magma Chiles, Ariz.	702, 981, 1192	Mariposa Mng., Tex.	662
Lode deposits, Alaska, Nenana	28	Magma Cop. Co.	718	Market reports. Weekly feature	
London-Ariz. Consol. Cop., Ariz.	940	—Annual report	1180	Marketing Bolivian tin ore	1014
London Mng. & Reduct., Colo.	81, 457	—Dividends, 1917	160	Marking mine survey stations	*560
Lone Pine Surprise Consol. Mng., Wash.	83	By months	32, 656	Markle, Ark.	306
Lone Star, Ark.	899	Production	806, 959, 1101	Marks, N. Cyanidation vs. flotation	645
Long, G. E. Graphite	844	Magnetic sulphide ores—Microstructures	106	Mariott, H. F.	34
Long John, Calif.	813	Magnesite, Canada	591 (errata) 695	Transvaal mining	123
Long-range gun, German	754, 1104	Magnesite in 1917	111	Marsh, A. G.	484
Longfellow, Colo.	355	Magnesite Products Corp., Venez.	532	Marsh, Ida	307
Longhorn lease, Wis.	1026	Magnesite, Quebec	591 (errata) 695	Masters, V. F.	937
Longyear, E. J., Co., Minn.	82	—Wash., deposits	*665	Martin, H. G. Silicon determination	586
Longyear, J. M.	654	Magnesium in war work	135	Martin, R. L., died	937
Loomis, Suffern & Fernald. Depreciation	631	Magnetic concentration, iron, Mineville, N. Y.	*912	Mary Agnes, Ark.	446
Lorraine, Iron ore excites German greed	1059	Magnolia, Colo.	941	Mashonaland Agency, Ltd.	25
Lost Dutchman, Colo.	*1084	Magnolia Lead & Zinc	940	Mason, A. J.	927
Loughlin, G. F.	914	Magnolia Metal Co. Fostering of antimony	1088	Mason Valley Mines Co. See also "Gray	
Louis d'Or Mng., Ariz.	798	Manganigal, Calif.	575	Eagle	488
Louisiana Consol. Mng., Nev.	982, 1194	Mahoning, Minn., Steam-shovel mng.	*403	—Production	252, 806, 959, 1101
Low grade ore utilization, Germany	914	Major Gold Mng., Ariz.	176	Masonic Mines Assoc., Calif.	661
Lowell Gold Mng., Ariz.	893	Mahitska, Mo.	176	Mass Consol., Mich.	177, 532, 856, 981, 1149
Lowney Manganese Assoc., Nev.	618, *776	Maid of the Mist, Colo.	1149	—Annual report	616
Lubricating engineer's handbook	*1105	Maier, C. G. Sulphur and copper oxide deter-		—Production	221, 814
Lucas, A. F. Serbian appeal	845	mination	372	Matchless Mng. & Leg., Colo.	899
Lucas, J. A. Pump rods repair	*208	Maier, C. W.	1108		
Lucero	234	Mail delays. Editorial	*1189		
Lucia Cop., Utah	1110	Main, C. T.	891		
Lucky Corner, Colo.	487	Majestic, Utah	178, 448		
Lucky Jake, Calif.	899	Major Gold Mng., Calif.	81		
Lucky Jenny, Okla.	1064	Major things	760		
Lucky Star Cop., Utah	448	Majorca Mine, Mich.	355		
Lucky Syndicate, Okla.	1194	Make every stroke count. Editorial	1103		
Lucky Tiger Combination, Mex.: —Dividends, 1917	161	Malcolmson, J. W., death	34, 150		
By months	32, 656	Malmoe Mng. & Mfg., Colo.	703		
Lucky Two, Colo.	855	Mammoth, Calif.	486, 661, 899		
Lugless copper anode	*924	—Production	806, 959, 1101		
Lumber in war industries	891	Mammoth Cop., Utah	81, 264, 1025, 1026		
Lumber industry—Govt. may take	518	—Production	252, 307		
Lumber shortage, France	210	Mammoth Devel., Ariz.	176, 854		
Luna, G. Formulas for ore sorting	1178	Mammoth Tunnel, Colo.	813		
Lupton, C. T. Anticlines, Wyo.	936	Mammoth, Wash.	1194		
Luty, B. E. V. Pittsburgh iron market, 1917	72	Management. See "Efficiency."			
Lyons, T. E.	688	Manager's rept.—Standard form	826		
M		Mandy, Manitoba	822		
M. A. Hanna Co. See "Hanna."		Manganese, Ariz.	1101		
M. K. & T., Mo.	487	Manganese Assoc., Nev.	618, 941		
Mabee, H. C. Molybdenum determination	836	Manganese—Brazil	845, 1140		
McAdoo, W. G., appointed Direct. Gen. of rail-		Piracaua deposits	479		
roads	25	Imports and exports	28		
—Resists R. R. expansion	607	Butte, Mont. Description of ores	1076		
McAlpin, G. W. Instrument stand	*247	—Calif.	305, 940, 979		
McBean, D. D., died	484	Caucasus, Germany wants	927		
Macbeth, R.	929, 971	—Cuba, prospects	779		
McBride & Bloom, Kan.	818	Determination	248		
McCallum, Ariz.	354, 486, 940	Manganese Devel., Ark.	813		
McCarty, Calif.	307	Manganese estimation in alloys and dust	407		
McCaskey, H. D. Quicksilver production	315	—Fla. imports	297		
McClave, J. M. Flotation and gangue miner-		Gt. Br. resources	683		
als	738	—India, analyses	327		
McConnell, R. E.	852	Mont.	811		
McCormick, P.	937	Description of ores	1076		
McCormick, T. F.	1029	—Nev.	1186		
McCracken Silver-Lead Mines, Ariz.	80, 769	Clark Co. deposits	*775		
McCurdy, Okla.	1026	Manganese Peak, Calif.	1193		
McCurry Mng. & Milling, Ark.	617	Manganese—Price	1175		
McDaniel, A. K.	1022	Editorial	1189		
MacDonald, J. A. Siphon to unwater mine	399	—Prospecting	286		
McDonald, W. W. Cementation method	1080	Russia, deposits	1125		
McDougal, W. L.	1146	Manganese sulphate in flotation	916		
MacDowell, C. H.	927	Manganese—Sweden	932		
—Minerals Admin. testimony	971	Tenn.	530		
McDowell, J. S. Refractory silica brick	954	Tungsten occurrence in	.780, 1176		
MacE Iron Mng., Minn.	38, 82	—U. S.	564		
McEnaney, B. P., died	700	Districts	1139		
McGrath, T. O. Depletion and depreciation	202	Editorial	849		
—Standardization of reports	825	Import restrictions	845		
Editorial	848	1917 review	134		
McGregor, A. G.	261	Price schedule	1053		
McGregor, J. D., died	572	Editorial	1057		
MacGregor, R. M.	700	Producers and consumers	195		
Machine tools, Govt. appeal	153	Imports and exports	251		
McInnis, J. H.	174	Vt. deposits	779		
MacIntyre, Mo.	770	Va., Shenandoah Valley	173		
McIntyre, Ont.	38, 178, 942, 1064,	Washington plant Eureka Mng., Ark.	*778		
—semi-annual report	308, 356	Washington, deposits	1082		
McKay, A. H.	767, 937	Western U. S.	549		
Mackay, A. N.	304	Manganiferous iron mng., Cuyuna, Minn.	*269, 530		
Mackenzie, A. G.	1060	Manganiferous ores—Producers and consumers	195		
McKenzie, C. S.	484	Manhattan Amal. Mines Synd., Nev.	178		
McKenzie, Colo.	1063	Manhattan apex decision	1024		
Mackenzie, J. H.	978	Manhattan Consol. Nev., 178, 222, 400, 448,			
McKenzie, Minn.	270	576, 618, 704, 770, 856, 900, 941, 982,			
McKinley-Darragh Savage, Ont.	178, 488, 737,	1026, 1110, 1194			
—Dividends	767, 900	Manhattan Dexter, Nev.	222		
—Flotation	356	Manhattan Mustang, Nev.	222		
—Production	942, 1110	Manhattan Red Top, Nev.	400		
McKinney Steel, Minn.	221	Manitoba mining, 1917 review	119		
McLachlan, D. G.	218	Mann, H. T. Addition agents in flotation	*915		
McLaughlin, T. P. Labor laws, Calif.	*527	Mann Mill, Colo.	263		
McLaughlin, R. P.	897, 1022	Manning, Van. H. See also "Bur. of Mines."	936		
		Manuel, Calif.	486		
		Manufacturers and labor problem	433		

	Page		Page
Mexico—Gold embargo	657	Minerals and Their Derivatives Bd. ( <i>Cont'd.</i> )	
—Iron ore deposits	1123	—Questionnaires	564
—Labor. Wages problem	557	Minerals control, Portugal	802
—Mineral statistics, 1917	564	Minerals, low grade, utilization, Germany	369
—Mng. machinery imports	1056	Minerals Prod. Co., Colo.	263
—Mining, 1917 review	120	Minerals Separation machine	717
—Petroleum	698, 1056	Minerals Separation Ltd.	843
—Silver embargo	657	Minerals Separation No. Amer. Corp.	261
—Sulphur	306	—Annual meeting	758
—Taxation	150, 657, 793, 889, 959	—Butte & Superior litigation, 99, 397, 609,	
—Zinc tax	657	938, 1141	
Mexico's relapse	334	Editorial	934
Meyer, E., Jr.	887	U. S. Ct. of Appeals decision	962, 974
—Photo	*319	Editorial	976
Meyer, H. A.	659	—Canadian royalties	306
Meyer, H. G. Zirconium	330	—Flotation license	332
Miami-Ada Mng. Co., Okla.	36, 487	—House of Lords testimony	843
Miami Cop.	812	—Miami Cop. litigation	99
—Dividends	440, 1019	—Royalty schedule	333
—Flotation litigation	99	Minerals Separation Amer. Synd.	843
—Flotation practice	717	Mines administration. See "Minerals and Metals."	
—Hardinge mill data	484	Mines & Mng. House Comm. See "Leith."	
—Production	252, 806, 959, 1101	Mines Control. See "Minerals and Metals."	
Miami Thrift, Okla.	1110	Mines, Date of world's principal. 87 (erratum)	318
Miami Wonder, Okla.	1110	Mines explor., Ariz.	854
Miami-Yellville Mng., Ark.	176, 1194	—Govt. control. See "Minerals and Metals."	
Miami Zinc and Lead, Mo.	306	Mines taxation—Regulations	301
Mica, Brazil, exports	878	Mines—Valuation methods	322
Michigan, Ark.	306	Mining. See also "Costs."	
—Copper	1107	Mining & Metall. Soc. of Amer., 484, 614, 898	
—Labor	35, 353, 939	—Annual meeting	174
Michigan, Mich., 37, 308, 355, 487, 530, 532,		—Medal presentation	*594, 595
856, 900, 1026		—N. Y. Section	304
—Production	813	—Papers, etc.	510
Michigan Mng., Colo.	210	Mining, Algeria	1174
Michigan-Utah, Utah, 222, 532, 770, 900, 1194		Mining—Australasia, 1917 review	131
Microphone devel.	210	—Calif., 1916 statistics	219
Microstructures of magmatic ores	106	—Camp welfare. See "Welfare."	
—Silver ores	106	—Caved stope recovery	*1069, 1103
Mid-West Metal Mng., Calif.	617	—Cementation process	*584, *623
Midas, Calif.	221, 1149	—Central Amer., 1917 review	122
Middle Golconda, Ariz.	220	—Chronology. See "Chronology."	
Middle Tenn. Phosphate Co.	*285	—Colo., 1917 review	143
Midland Chief, Colo.	255	—Companies reports, Standardization	825
Midway, Nev., production	222, 856, 1064	—Comstock Lode	*1029, *1044
Military draft. See "Draft."		Mining Corp. of Canada 117, 308, 356, 400,	
Military trade schools	802	488, 942, 982, 1087, 1194	
Mill construction, Ariz.	876	—Dividends, 1917	161
Mill grinding tests, Miami	426	—By months	32, 656
Mill liners. See "Liners."		—Production	178, 264
Mill mechanism in nitrate leaching	*987	Mining costs. See "Costs."	
Millasier, Colo.	177, 769	—Cuba, 1917 review	121
Miller, E. C. Should U. S. foster antimony?	1088	—Cuyuna dist.	*269
Miller, G. A.	1106	—Dividends. See "Dividends."	
Miller Gold Mng., Colo.	1149	—Drift-gravel, E. Siberia	*859, 894
Miller Indep., Ont.	178, 1194	Mining engineering as profession	765
Miller Lake-O'Brien, Ont. Production	38	Mining—France	*636
Miller Land, Wis.	178	—Germany, situation	476
Miller, W. G.	978	—Ida., 1917 review	145
Millikan, R. A.	930	Mining index	41, 267, 442, 697, 850, 1020
Milliken, J. T.	810	Mining—Industry—Taxation	1139
Milliken Rfg., Kan.	821	Mining Inst. of Scotland	810
Milling. See also "Ball-milling," "Flotation," "Tube-milling," etc.		Mining—Joplin district	*359, 411, *727, *1153
—Big Hurricane, Ark.	315	Mining lower levels, Comstock Lode	*1029, *1044
—Coeur d'Alene	*707	Mining, Manganese, Va. Crimora	875
—Determining new flow sheets	792	—Manitoba, 1917 review	119
—Joplin district	*727	Mining manual	*1105
Milling number	707	Mining, Mexico, 1917 review	120
—Editorial	764	—Molybdenum, Colo.	*905, *920
Millionaire Gold mine, Nev.	942	—Open cut, Siberia	*863
Millions—Of what use?	470	Tenn.	*284
Mills, J. A.	700	Va.	*418
Milnes, P. R. Electric power in mng.	*1113	—Open cut blasting	601, 1130
Minakem, Ont.	982	Mining stocks—Boston Exchange	86
Minarets, Calif.	769	N. Y. Curb, 1917	85
Mine accidents, 1916	630	N. Y. Exchange, 1914-17	84
Mine car dumping device	*600	Mining supplies. See Costs.	
Mine chemist. Poem	31	Mining files, Mexico	417
Mine forge. Heavy	*291	Mining—Transvaal, adverse factors	463
Mine La Motte. See "Missouri Metals."		—1917 review	128
Mine Managers Assoc., Cobalt	530	—Turkey	1162
Mine Operators' Assoc. of Picher	1147	—U. S., 1917 review	112
Mine regulations, N. Y.—Proposed hearing	965	—Utah, 1917 review	140
Mine supplies—Prices, Joplin	411	Minnehaea Mng. & Mfg., Colo.	703, 899
Mine Timber Bill	344	Minnesota. See also "Cuyuna."	
Mine timber, Colo.	701	Minnesota—Iron ore	1024
Mine unwatering siphon	599	1917 production	352
Mine valuation	639	—Mine valuation	353
Mine ventilation—Canvas tubing	325, *328, *336	Minnesota School of Mines Soc.	896
Mineral and metal production—Editorial	612	Minnie, Colo.	1064
Mineral Belt Invest., Okla.	982	Minnietta, Calif.	981
Mineral control bill. See "Minerals and Metals"		Minor-coining metals	522
Mineral Devel. Co., Ariz.	80	Miser, H. Okla.	532, 1110
Mineral Hill Consol., Ariz.	806	Miser, H. D.	810, 1146
Mineral Hill, Utah	488	Misima Gold, New Guinea	1062
Mineral Imports Comm.	649	Missouri. See also "Joplin."	
—Disbands	1186	Missouri Cobalt Co.	36, 66
—Hearings	656	Missouri Iron & Steel Corp.	812, 1150
—Minerals administration	690, 841	Missouri Labor	35
Mineral imports. Editorial	570	Missouri, Lead, 1917 review	65
Mineral Land Leasing Bill	573	Missouri mining districts	*359, *411, *727, *1153
Mineral Point Zinc, Wis.	70, 1026	—Map	939
Mineral production of South Af., 1917	1042	Missouri Metals Corp.	36, 66
Mineral Products, Utah	83, 770	Missouri, Zinc	616
Mineral Ridge Manganese Corp., Va.	770	Mitke, C. A., Efficiency	200
Mineral statistics—More frequent collection	564	Mocesuma Cop., Mex.	34
Mineralography or metallography. Editorial	934	Modderfontein Deep, Trans.—Production	1110
Mineralogy. Editorial	894	Modoc Consol., Colo.	703, 1109
Minerals. See also "Names of Minerals and Counties."		Moffat, Colo.	1063
Minerals and Metals Admin., 149, 217, 390, 520, 613, 646, 689, 690, 701, 757, 797, 1098		Moffat R. R. Tunnel, Colo.	979
—Committee report	796	Mogollon Miner., N. M.	353
—Editorials	298, 437, 571, 651, 933	—1917 prod.	353
—House Comm. hearings	656	—Safety skip device	*165
—House debate	844	Mogue Mng., S. D.	308, 982
—Molybdenum and	966	Mohave Annex Tungsten, Calif.	81
—Senate Comm. hearings	889, 970, 1011, 1052	Mohawk, Ariz.	854
—Western men advocate	701	Mohawk, Mich.	37, 487, 1149
—Westervelt letter	759	—Production	308
Minerals and Their Derivatives Bd.	436		
—Members	477		
Mohawk, Mich. (Cont'd.).		Mohawk, Mich. (Cont'd.).	
—Dividends		—Dividends	440
—Production		—Production	447
Moira Lake Fluorspar, Ont.		Mojaun, United, Calif.	400
Mokelumne Hill dist., Calif.		Mokelumne Hill dist., Calif.	307
Moldenke, R. Principles of iron founding		Moline & Ariz. Cop., Ariz.	1527
Molybdenum and Mines Control Bill		Molly B., Colo.	399, 487, 575, 769, 813, 1109
Molybdenum—Canada		Molybdenum and Mines Control Bill	966
—1917 production		Molybdenum—Canada	530
—Concentration		—1917 production	591
—Determination in ores and concentrates		—Concentration	880
—Identification		—Determination	836
—Norway, industry		—Identification	891
—Ontario		—Norway, industry	499
—Ore deposits		—Ontario	1591, (errata) 695, 939, 1087
Molybdenum Products Co., Colo.		Montana	1125
—1917 review		Bingham, Utah	813, 1109
Molybdenum—Russia		—Accident Bd. rept.	92
—U. S., 1917 review		Montana	932
—Sweden		—Coal	305, 352
Monzonite, U. S., Imports restricted		Montana Consol., Mont.	1194
Mond Nickel Co.		Montana Council of Nat. Defence	938
Mond No. 1 mine accident. Editorial		Montana—Labor	445, 485, 573, 616, 660, 1023, 1055
Mondell, Rep.		—Manganese	811
Monell, A. H.		—Description of ores	1076
—Photo		—Petroleum	615
Monetaire, Utah		—Rhodocrosite	1078
Money, Japan		Montana Soc. of Engrs.	572, 852
Monkey Hill, Ark.		Montana State Employers Assoc.	445
Montana-Bingham, Utah		Montana State School of mines	1062
Montana, Accident Bd. rept.		Montana States, Mont.	941
Montana, Coal		Montana Tonopah, Nev.—Production	38, 178, 222, 356, 488, 618, 662, 704, 770, 814, 876, 900, 942, 982, 1064, 1101, 1150
Montana Consol., Mont.		Monte Carlo, Calif.	940, 1025
Montana Council of Nat. Defence		Monte Cristo, Ariz.	940
Montana—Labor		Monte Cristo, Colo.	487, 855
Montana—Lignite		Montezuma, Calif.	36, 354, 398
Montreal Kirkland		Montreal Kirkland	982
Montreal Metall. Assoc.		Montreal	810
Moody, H. M.		Moody, H. M.	927
Moonlight, Calif.		Moonlight, Calif.	1193
Moore, E. S. Air blasts, Kolar Gold field, India		Moore, E. S. Air blasts, Kolar Gold field, India	957
Moore, F. J.		Moore, F. J.	700
Moore, P. N.		Moore, P. N.	889, 899
Moratorium advocated		Moratorium advocated	485
Morehead, J. M.		Morgan, C. C., died	896
Morgan, C. P. & Co. as munition buyers		Morgan, C. P. & Co. as munition buyers	340
Morgan, W. F.		Morgan, W. F.	1098
Morning Glory, Calif.		Morning Glory, Calif.	81
Morning Glory, Colo.		Morning Glory, Colo.	263
Morning Glory, Nev. White Caps suit.		Morning Glory, Nev. White Caps suit.	1024
Morning Star Mng., Ark.—Concentrator		Morning Star Mng., Ark.—Concentrator	329
Morris, H. C.		Morris, H. C.	1012
Morrison, H. A. Versatile tractor		Morrison, H. A. Versatile tractor	1004
Morrison, J. M.		Morrow, W. G.	767
Morrow, W. W.		Morrow, W. W.	862
Moses, W. Riveting record		Moses, W. Riveting record	1009
Mother Lode Cop. Mines, Alaska		Mother Lode Cop. Mines, Alaska	80, 870, 1063
—Flotation practice		Mother Lode dist., Calif.	745
Mother Lode dist., Calif.		Mother Lode dist., Calif.	34, 768
—Farmers law suits		Motherwell, H. A. B. Colorimetric bismuth determination	852
—Labor		Motor fuel from kerosene distillates	425
Mount Blaine Oil Shale Prod., Colo.		Mount Blaine Oil Shale Prod., Colo.	703
Mount Champion, Colo.		Mount Champion, Colo.	447
Mount Cuthbert, Aus.		Mount Cuthbert, Aus.	59
Mount Elliott, Aus.		Mount Elliott, Aus.	59, 952, 1100
—Refinery		Mount Fillmore, Calif.	1025
Mount Gaines, Calif.		Mount Gaines, Calif.	531
Mt. Jefferson, Calif.		Mt. Jefferson, Calif.	307
Mount Lyell Blocks Cop. Mines, Aus.		Mount Lyell Blocks Cop. Mines, Aus.	59, 952, 1100
Mount Lyell Mng. & R. R. Railway, Aus.		Mount Lyell Mng. & R. R. Railway, Aus.	939, 952, 1100
—After-war project		Mount Stewart Mines, Aus.	939
—Annual report		Mt. Washington, Mont.	178, 814
Mount Morgan Gold Mng., Aus.		Mountain Cap., Calif.	221, 354, 486
Mount Morgan Gold Mng., Aus.		Mountain Flower Mng., Colo.	941, 1063
—Annual report		Mountain King, Calif.	531
Mount Stewart Mines, Aus.		Mountain States, Mont.	

Page	Page
Mutch, D. A. ....	767
Mutual Co-operative Mng., Colo. ....	177, 263
Mutuality plan, Oliver Iron Mng. ....	1166
Myers, R. V. Artillery officers wanted. ....	673
Mythical metal octopus. Editorial. ....	847
N	
Nagle, F. J. ....	1022
Nason, F. L. Va. pyrrhotite. ....	1198
National Americanization Comm. ....	1061
National Army, Chemists in. ....	755
National Bauxite Co., Ga. ....	13
National Chamber of Mines, Nuevo Leon, Mex. ....	700
National City Bank, Petroleum. ....	1140
National Coal Assoc. ....	518
National Copper, Ida. ....	1193
National debts. ....	838
National economics. Editorial. ....	481
National Foreign Trade Convention. ....	887
National Foreign Trade Council—Gold stock. ....	886
National, Ida. ....	710
National Indust. Conf. Bd. ....	295
—Causes of strikes. ....	562
National Lead Co. See also "St. Louis Smg." ....	66
National Metal Trade Assoc. ....	896
National Mines, Ont. ....	84, 785, 942
National Potash Corp, Ont. ....	84, 176
National Rfg., Kan. ....	821
National Research Council. ....	1136
National Safety Co. ....	896
National Safety Council. ....	922
National Silk Buying Co. ....	930
National Tube Co. ....	795
National Tungsten & Silver, Mont. ....	222
National War Labor Bd.—Members. ....	682
—Program. ....	366
National Zinc & Lead. ....	221
Nations at war. ....	157
Natomas Co., Calif. ....	9, 81, 221
Naval Appropriation Bill. ....	888, 891, 1010
Naval ordnance matters well handled. ....	254
Naval Service, Engineers wanted. ....	968
Navy Dept., Engineer officers trained. ....	1097
Naxos emery. ....	212
Nearing, S. Editorial. ....	938
Nebel, M. L. Cementation. ....	1080
Nebo, Okla. ....	1194
Necrology, 1917. ....	86
Needles Mng. & Smg., Ariz. ....	220
Needles Mng., Utah. ....	1064
Negligent bolting engineers. ....	187
Neill, Okla. ....	814
Neill, B. ....	572
Nelson, W. A. ....	978
Nemo, Okla. ....	1110
Nenana, Alaska—Coal lands. ....	243
—Lode deposits. ....	28
Nesbit, A. ....	396
Neabitt, C. E. Silica brick. ....	194
Netta Mill. See "Eagle-Picher." ....	1078
Nettie, Mont. ....	797
Nevada—Antimony deposits. ....	83
Nevada Consol. Co. ....	1092
—Annual report. ....	1092
—Caving system, Ruth mine. ....	503
—Dividends, 1917	160
—By months. ....	32, 656
—Production. ....	252, 806, 959, 1101
—Quarterly report. ....	522
Nevada—Geology. ....	106
Nevada—Manganese. ....	1186
—Clark Co. ....	775
Nevada Packard, Nev. ....	1194
Nevada, Platinum. ....	455
Nevada Progressive, Calif. ....	81
Nevada—Travelling mng. school. ....	898
Nevada Wonder, Nev.—Dividends. ....	1019
Nevada—Yellow Pine ore deposits. ....	455
New Arcadian, Mich. ....	177, 532, 617, 941
New Baltic Cop., Mich. ....	856, 900, 1064, 1109, 1149
New Caledonia—Chrome deposits. ....	1124
—Mineral exports. ....	591
—Nickel. ....	974
New Cornelia Cop., Ariz. ....	80, 252, 307, 898, 1063
—Annual report. ....	885
—Co-operative store. ....	830
—Production. ....	263, 806, 854, 959, 981, 1101, 1149
—Steam shovel ore car. ....	416
New Dominion, Ariz. ....	36
New Dominion, Colo. ....	941
New Era, Colo. ....	307
New Idria, Calif., Dividends, 1917. ....	160
—By months. ....	32, 843
New Jersey Zinc Co. ....	992, 1026
—Dividends. ....	440, 1019
New mining construction, 1917. ....	80
New publications. ....	350, 766, 936
New Puritan, S. D. ....	83
New Quincy, Utah. ....	178, 488
New regiments railway engineers. ....	1142
New Russia. ....	235
New South Wales, Platinum. ....	1176
New spirit. Editorial. ....	847
New tax law. Editorial. ....	1057
New United Verde, Ariz. ....	855
New York Elect. Soc. ....	484
New York—Graphite, 1917 review. ....	151
New York State Indust. Comm. ....	965
New York & Honduras Rosario. ....	122
New Zealand, Phosphate. ....	821
Newark Museum Assoc. ....	218
Newberry, A. W. photo. ....	953
Newbrough, W. Variations in transit needle. ....	21
Newfoundland, Iron ore deposits. ....	1118
Newhouse, Kan. ....	355
Newkirk, H. A. ....	852
Newland, D. H. Graphite, N. Y. ....	151
Newman, S. Handy penwiper. ....	22
Newray, Ont. ....	400, 532, 704, 942
News Bureau, Boston. Price fixing. ....	1181
—Use of millionaire. ....	470
—War co-ordination. ....	760
Newton, E. ....	1139
Newton Mill, Colo. ....	941
Niagara power requisitioned. ....	27
Niagua Mng. & Royalty, Okla. ....	82
Nicollite, Ont. ....	980
Nicholls, W. J. ....	978
Nichols-Laying Chem., Nev. ....	178
Nichols, W. H. Mines control. ....	656
Nicholson, H. H. ....	174, 396, 1060
Nicholson, M. J. ....	269
Nickel, Alaska. ....	28
—Canada, deposits. ....	1125
—Germany. ....	1098
—New Caledonia. ....	974
—Ont. ....	1087
—Price. ....	1012
Nickel silver. ....	907
Nickel—Sweden. ....	932
Nicronium hardening. ....	335
Nickles, J. M. No. Amer. geology. ....	481
Night lettergrams by courier. Editorial. ....	1766
Nil Desperandum Mines, Colo. ....	81
Nipissing Mines Co., Ltd.—Annual report. ....	1179
Nitrate. ....	785
—Production. ....	178, 264, 814, 1110
—Various notes. ....	84, 117, 118, 308, 356, 400,
Nisi Prius, Colo. ....	399, 813
Nissen, A. E. ....	937
Nitrate, Calif., Death Valley. ....	436
—Chile. ....	889
Nitrate—Germany. ....	948
—Leaching, costs, Chile. ....	906
Nitrate plant No. 3. ....	840
—Modern mill mechanism in. ....	987
Nitrate purchase board. ....	212
Nitrate Railways Co., Chile. ....	674
Nitrate—Sailing vessels to carry. ....	27
Nitrogen, Synthetic. ....	991
Nitroglycerine substitute. ....	1126
Nix-Knight-Michell, Kan. ....	1026
Nixon-Nev., Nev. ....	1026
Noble Chrome, Calif. ....	855
Non-essential industry. See "Industries." ....	660
Non-Partisan League. ....	660
Noon, T. F. Career and death. ....	597
Norambagua, Calif. ....	221, 354
Norcross Chem., Colo. ....	531
Norcross, F. S., Jr. ....	261
Nordberg electric hoist. ....	681
Norris, E. M. Fireproofing mine shaft. ....	1126
Norse Mng. Co., Calif. ....	36
North American, Mo. ....	1150
North Ark. zinc and lead field. ....	813
North Beck, Utah. ....	576
North Butte Mng. ....	83, 704, 1150
—Dividends. ....	200, 843
Granite Mt. Shaft. ....	352
—Production. ....	222
—Quarterly report. ....	448
Ventilation system. ....	325, 328
North Davidson, Ont. ....	1026
North Lake, Mich. ....	487, 814, 900, 941, 981, 1064, 1109
North Star, Ariz. ....	854
North Star mines, Calif. ....	81, 354, 573, 807
—Annual report. ....	1134
—Dividends 1917	32, 656
—By months. ....	180, 656
North Star Mill, Colo. ....	615
North Star Mng., Ark. ....	80, 446
North W. O. ....	218
Northend mines. See "Comstock." ....	615
Northern Calif. Power Co. ....	785
Northern Customs, Concord, Ont. ....	82
Northern Light Mng. & Milling, Ida. ....	82
Northern Mont. Natural Gas Co. ....	83, 529
Northport Smg. & Rfg., Wash. ....	67
Northrop, J. D. Petroleum production. ....	67
Northwest Inspiration, Ariz. ....	220
Northwest Magnesite Co., Wash. ....	83, 662, 666, 853, 1150
Northwest Mng. Assoc. ....	262, 553, 940
—Annual convention. ....	460
—Govt. control of smelting. ....	574
Northwestern Electric Co. ....	1009
Norway, Iron Deposits. ....	441, 1002, 1119
—Metal imports from U. S. ....	297
Molybdenum industry. ....	499
Raw-material dept. ....	512
Silver. ....	591
—U. S. trade agreement. ....	971
Norwood, Okla. ....	942
Notman, A. photo. ....	274
Noyes, A. A. Germanium detection. ....	249
Number Nine, Calif. ....	81
Nuoline tests. ....	613
Nut for air-hose couplings. ....	599
Nyman Consol., Calif. ....	221
O	
O. & M. Mng., Mo. ....	82
O. K. Rfg., Kan. ....	821
Oaks Co., N. M. ....	535
Oatman United Gold, Ariz. ....	398, 940
O'Brien, Ont. ....	488, 1087
—Production. ....	178
Obsolescence and depreciation. ....	631
Ocean traffic, Needles, abolished. ....	649
Occupation tax notices, Utah. ....	897
Ocean Wave, Colo. ....	307
Ocher, France. ....	156
O'Donnell, T. A. ....	444, 979
O'Gara, J. ....	1146
Ogen Chrome, Calif. ....	813
Ohio & Colo. Smg. & Rfg.—Smelting investigations, Colo. ....	735, 856, 1107
Ohio Cop. Co. ....	735, 856, 1107
—Half yearly report. ....	448
—New construction. ....	83
Ohio mine, Mich. ....	1026
Ohio Oil Co., Ill. ....	1081
Oil. See "Petroleum." ....	181
Oil can extension. ....	384
Oil land leasing bill. ....	895, 897
Oil land valuation. ....	544
Oil, Lubrication, trouble in flotation. ....	738
Oil-saving rules, Germany. ....	506
Oil shale, Colo. ....	305
Oil shale treatment, Colo. ....	917
—Utah. ....	262, 400
Oil shale importance. Editorial. ....	170
Oil shales investigation, Utah. ....	397
Oil variations in flotation. ....	100
Oiling mine cars. ....	1173
Oils, Flotation. ....	915
—Tests. ....	1043
Oklahoma Mng., Mo. ....	982, 1026
Oklahoma Zinc Mine & Oil operators. ....	1108
Oko, Okla. ....	1026
Old Dominion, Ariz.—Dividends, 1917. ....	160
—By months. ....	32, 656
—Production. ....	856, 959, 1101
Old Eureka Mng. Co., Calif. ....	574, 702, 1025
—Reopening cost. ....	768
Old Hat, Ariz. ....	981
Old Mexico, Wis. ....	1026
Old miner, Poem. ....	1169
Old Scranton, Utah. ....	1194
O'Leary, J. W. ....	896
Oliver filters. ....	714
Oliver, G. S. ....	1098
Oliver Iron Mng., Minn. ....	177, 264, 308, 447, 532, 662, 770, 852, 941
—Headquarters office. ....	579
Oliver, Mich. ....	355
Onahman, Minn. ....	177
One Hundred and Thirty-ninth Engrs. ....	529
One, two, three! (Poster) Facing. ....	579
Ontario—Cobalt, 1917 prod. ....	353
—Copper. ....	1087
Ontario Dept. of Mines. ....	898
—Graphite, 1917 review. ....	1047
—Flotation. ....	1047
—Labor. ....	486, 616
Metals. ....	1087
—Mining, 1917 review. ....	117
Molybdenum. ....	591 (errata) 695, 939, 1087
Concentration. ....	550
Natural gas. ....	616
Niccolite. ....	990
Nickel. ....	1087
—Photo of mines. ....	960, 961
Silver. ....	530, 1087
Ontario Silver Mng., Utah. ....	488, 856, 1064, 1107
Ontario, Smaltite. ....	980
Ontario, Smg. Co., Okla. ....	62, 662
Ontario, Utah. Production. ....	532
Onwatta Mng., Ark. ....	899
Open cut mng. See also "Mining." ....	365, 601
Opencut blasting, Powder in. ....	735
Operating troubles, Flotation. ....	176
Ophir, Colo. ....	176
Ophir Mng. Co., Nev. ....	942, 1045
—See also Butte-Detroit. ....	352, 529
Ophir, Ont. ....	38, 488, 942, 1064
Ophir Silver Mng., Calif. ....	175
—Mng. methods. ....	1029
Ordnance base, U. S. in France. ....	562
Ordnance Dept.—Organization chart. ....	289
Reorganizes. ....	166
Ordnance men wanted. ....	519, 647
Ordnance plant for interior. ....	928, 969
Ore and gangue. Editorial. ....	438
Ore deposits, Nev., Yellow Pine. ....	455
Ore freight increase asked. ....	344
Ore mining methods. ....	1527
Ore price schedule, Arg. Reduct. ....	1107
Ore Sales Comm. advocated. ....	905
Ore-sales investigations, Colo. ....	538
Ore sorting formulas. ....	1178
Orebody valuation. ....	322
Oregon & Eastern R. R. ....	615
Oregon—Chalcocite flotation. ....	422
—Chromite. ....</td	

Page	Page
Overman Bill, Editorial.....	524, 975
Overpeck, H. W. ....	261
Overproduction may stop industry.....	388
Owen, T. M. ....	710
Oxides of lead, 1917.....	62
Oxidized ore flotation.....	717
—Determination of copper in.....	552
Oxygen as explosive.....	1126
<b>P</b>	
P. O. S., Colo.....	899
Pacific Coast Dredging, Calif.....	81
Pacific Dredge, Calif.....	354
Pacific Electro Metals, Calif.....	81, 1063
Pacific Gas & Elect. Co.....	897
Pacific Gold Dredging Co.....	1025
Pacific Gold Mines Corp., Calif.....	399, 661
Pacific Gold Mng. & M., Utah.....	356, 448
—Dividends.....	656, 843
Pack, R. W. ....	107
Pactolus, Colo.....	1025
Page, Ark. ....	981
Page impact machine.....	1037
Page, T. W., photo.....	*829
Paige, S. ....	1002
Palme, H. S. Corrosion of electrodes.....	837
Palau Metals Co. ....	38
Palladium, U. S., 1917, review.....	134
—Commandeered Editorial.....	969, 1107
Palmer, D. M. ....	614
Palmer, E. ....	761
Palmer, L. A. ....	810
Palmer, W. S. Manganese in Nev. ....	1186
—Occurrence of tungsten in manganese.....	730, 1176
Paloma mine, Mex.—Triangulation	164
Pan-Amer. Petroleum & Transport Co. Divi-	dends.....
Paramount Reduction, Colo.....	81, 1149
Pardee, J. T. Colville Reservation.....	565
—Manganese, Butte, Mont.....	1076
Park City King, Utah.....	488, 1110
Park City shipments 264, 356, 400, 488, 532,	662, 704, 814, 856, 981, 1064, 1110, 1150
Park, J. Geology of Oamaru dist. ....	1105
Park-Utah, Utah.....	308, 400, 1150
Parker Chrome, Calif.....	981
Parker, Henry, Ill. ....	1081
Parks, H. M. Oregon chromite.....	1091
Parks, R. E. ....	1106
Parmelee, H. C. ....	1002
Parmelee Silver Mines, Ariz.....	854
Parson Claims, Ont. ....	84
Parsons, F. W. ....	475
Passiflora, Colo. ....	355
Patchin, R. H. ....	888
Patents, New. Weekly feature	—Enemy.....
Patrich Mine, Minn. ....	82
Patricia, Ont. ....	178, 618, 704, 900, 1037, 1194
Patterson & Bradley Leasing, Colo. 177, 283,	769, 1109
Patterson, R. H. ....	444
Patton, Ariz. ....	354
Patton, H. B. ....	1022
Paul, J. W. ....	930
Pay rolls, Semi-monthly, Utah.....	853
Payen, E. French mng. law.....	255
Payne, H. M. Thawing frozen ground.....	307
Payrock, Colo. ....	211
Peabody Consol. Corp., Ariz. ....	398
Peabody, F. S. Coal shortage	—Photo.....
—Peace, American.....	842
Pearce, W. A. Safety signal switch.....	*1133
Pearl, Ariz. ....	398
Pearson, W. K. ....	940
Peat as fuel.....	176, 616
Peat, Canada.....	1108
Pebbles, Artificial, for tube-milling.....	*1033
Peck, Ariz. ....	940
Peck, G. L. ....	919
Peerless, San Juan, Colo. ....	769
Pegasus goes over the top.....	566
Peixes, M. ....	696
Pellens, W. Jr. ....	978
Pemberthy, I. J. died.....	700
Pengland, W. died.....	659
Penn Canadian, Ont. ....	982
Penniac Reef, Manitoba.....	488
Pennsylvania Mng., Calif. ....	855
Pennsylvania R. R. Editorial.....	695
Penrose, R. A. F., Jr. ....	852
Pensacola Tar & Turpentine Co. Flotation	oil tests.....
Penwiper, Handy.....	1043, 22
Perigo, Colo. ....	1025, 981
Permanganate. See "Potassium.".....	937
Perry, E. H. died.....	261
Perry, O. B. ....	922
Perseverance, Alaska—Blasting	Pershing gets steel.....
—1917 production.....	754
Peru, Mining, 1917 review.....	124
Peruvian Cop. Utah.....	178
Peterson, A. Y. ....	978
Peterson, F. P. Motor fuel.....	425
Peterson Lake, Ont. ....	488, 576, 1064
Petal Gold Mng., Colo. ....	703
Petroleum and natural gas register.....	1766
Petroleum—Argentina.....	691
—Ariz. ....	530
—Calif. 175, 445, 573, 615, 660, 701, 853,	897, 938, 979, 1061
Naval reserve lands.....	35
New maps.....	573
1917 production.....	1142
—Canada, Gas and oil fields.....	1099
—Chilean swindle.....	526
—Colo. ....	938
Oil shale treatment.....	*917
Petroleum Congress, Requa's address.....	682
Petroleum—Dominican Rep. ....	1041
—Drilling record, Kan. ....	819
—Fuel oil license.....	341
Petroleum geologist's work.....	822
Petroleum—Great Br. ....	824
—Ill. fields.....	*181
Cementation.....	1080
—Kansas, Industry.....	*817
—Ky. oil fields.....	781
Mexico.....	696, 1056
Taxation.....	959
Mont. ....	615
Production curves.....	544
Trinidad, control.....	1116
U. S. ....	682, 1140
Economy urged.....	1051
Price .....	485, 1009, 1053
Private contracts may be abrogated.....	608
Production, 1917.....	67
Search for new pools.....	*11
Situation.....	517
Valuation of lands.....	544
Venezuela.....	1162
Petroleum War Service Comm. ....	1107
Petroleum withdrawals.....	315
Petroleum—World production.....	1140
Wyo. ....	23
Pfirman, F. ....	35, 219
Phalen, W. C. Central Ky. phosphate.....	1936
Salt making.....	1766
Salt making, U. S. ....	936
Dividends, 1917.....	160
By months.....	32, 656
Flotation practice.....	225
Heap leaching exper. ....	*225
Philadelphia, Colo. ....	1109
Philadelphia Explor. Calif. ....	81
Philippine Islands, Bur. of Science Rept. ....	1936
Philippine Islands, Coal.....	17
Philippine Journal of Sci. ....	1936
Philipsburg Mng., Mont. ....	82, 177, 222, 982
Philippsburg district, Mont. ....	397
Shipments.....	175
Phillips, Kan. ....	813
Phillips, R. ....	221
Phillips, W. B. died.....	1190
Phillips, W. T. Bismuth determination.....	882
Phoenix, Mich. ....	37
Phosphate, Algeria.....	1174
—Electric smelting.....	879
Ky. ....	932
New Zealand.....	821
—U. S., 1917.....	1079
Western delay.....	256
Phosphoric acid—Ammo. molybdate recovery.....	249
Picher-Oklahoma, Mo. ....	662
Pickands-Mather, Minn. 74, 82, 221, 662, 941,	1110
Pickerell, G. H. Manganese at Piracaua .....	470
Picric-acid plants.....	1053
Pig tin. See "Tin.".....	1194
Pilaris, Mont. ....	1194
Pilling, W. S. ....	852
Pinal Consol. Ariz. ....	854, 898, 940
Pinal Dome Oil, Calif. ....	354
Pinchot, G. Water power bill.....	338
Pine Creek Tungsten, Calif. ....	354, 1108
Pingree Mines, Colo. ....	575, 703
Pinney, M. E. died.....	1100
Pintados Salar, Chile, Potash.....	678
—Extraction.....	678
Pioche Mines, Nev. ....	941
Pioneer, Calif. ....	446, 1063, 1108
Pioneer Consol., Nev. ....	1064
Pipe corrosion.....	287
Pipe diameter determination chart.....	*684
Pipe, Iron, test.....	380
Pipe-line, Berry joint.....	*472
Pipe vise, "Chaining".....	*684
Pipette for fuming liquids.....	*604
Pigette, Safety.....	*249
Piracana, Brazil—Manganese.....	479
Pittman bill. See "Silver-purchase.".....	1108
Pittsburgh iron and steel market, 1917.....	72
Pittsburgh-Jerome, Ariz. ....	574, 1108, 1114
Pittsburgh-Liberty, Calif. ....	263
Pittsburgh-Lorraine, Ont. ....	84, 400, 662, 856
Plute Co., Utah, Potash.....	1061
Placer Chrome Co., Calif. ....	81
Placer chrome concentrating, Calif. ....	462
Placer County Chrome, Calif. ....	898
Plane, Self acting.....	575
Plastic refractory for boiler baffles.....	1049
Plate Mine, N. S. ....	980
Platform for feeding stamps.....	925
Platinum—Adirondacks	—Columbia, supply. Editorial.....
—Draper's Russian exploit.....	523
Nev. deposits.....	455
N. S. W. ....	1178
Russia.....	128, 377, 638
Editorial.....	846
Supply. Editorial.....	523
Sudbury ore source.....	835
U. S., 1917.....	901
Commandeered.....	476, 605, 969, 1107
Price fixing. Editorial.....	976
Editorial.....	934
Volatile, fake.....	805
World's stock.....	51
Plaster Bros. ....	814, 900, 1193
Pleasant Valley, Mo. ....	38, 308
Plight of gold miners. Editorial.....	1143
Plug, Slotted survey.....	*560
Plumbago, Ceylon. See also "Graphite".....	752
Plutus, Calif. ....	486
Plymouth Consol., Calif. ....	768, 870, 1149
Dividends.....	*560
Pneumatic tampers .....	*1048
Pocahontas, Ariz. ....	36, 354
Poetry	—Advertisements.....
—Engineers, The .....	977
Hunka tin .....	698
—Keeping down the costs.....	935
Poetry	—Annual report .....
Portia, The Finn.....	171
—Mine chemist.....	31
Old miner .....	1169
Scout engineer.....	765
Slogan, The .....	507
Pole Star Cop., Utah.....	576
Polk-Southard, Ark. ....	813
Pollard, J. ....	486
Polymerization oil test.....	1043
Porcupine Crown, Ont. ....	38, 856, 1026
Porcupine-Vipond, Ont. ....	178, 1064
Porjus, Sweden—Electric smelting.....	638
Porous briquetting zinc charge.....	370, 883, 1175
Porphyry Cop., Ariz. ....	306, 854
Porphyry Dike, Mont. ....	662, 941
Port Arthur Cop., Ont. ....	84, 118
Portland Gold Mng. Co., Colo. 81, 263, 769,	871, 1109
—Annual report .....	1135
Dividends .....	260, 843
Portland Lead & Zinc, Okla. ....	982
Porto Rico Mng., R. R. Conklin decision.....	1147
Portugal takes over mines.....	802
Portugal, Tungsten.....	635
Position of smg. industry. Editorial.....	693
Post, Boston, Taxation.....	1096
Post-war trade, Gt. Br. ....	562, 755
Potash, Crownin.....	871, 1109
Potash, Ariz. ....	176
Potash Brine Zone, Calif. ....	981
Potash—Calif. ....	*985, *1000
Cement dust as source.....	596
Central America .....	565
—Chile .....	1003
Pintados Salar	—Extraction.....
Colo. ....	897
Delay .....	256
Chilean nitrate source.....	348
Feldspar source.....	176, 382
Lands case, Calif. Trona .....	907
Leasing regulations .....	761
Recovery from greensand .....	819
Spanish deposits .....	*643
U. S. ....	398
Lands opened .....	841
1917 production .....	1142
Utah .....	1061
Potassium cyanide as. Sodium .....	918
Potassium permanganate—Sulphur determination in .....	162
Potassium salts extraction, Chile .....	678
Potassium sulphate in flotation .....	916
Potosi, Colo. ....	531
Potosi, Nev. ....	455
Potrillos mine. See "Andes Cop.".....	1022
On Aircraft Bd. ....	1182
Potts Canyon Mng., Ariz. ....	702
Powder in open cut blasting .....	365, 601, 1130
Powder blast, Perseverance, Alaska .....	1922
Powder River Gold Dredging, Colo. 177, 818, 1109	1109
Powell, J. W. Memorial monument .....	971
Power & Mng. Machinery's ball mill .....	935
Power generation at coal mines .....	754
Power, Hydro-electric, Yavapai, Ariz. ....	*1113
Power plants—Saving of fuel .....	1008
Powers, F. ....	980
Prairie Flower, Nev. ....	457
Pratt, J. H. ....	34
—Photo .....	*953
Precipitation, Copper, with coke breeze .....	1089
Gold, with charcoal .....	506
Premier Langmuir, Ont. ....	254
Prentiss, G. L. Cementation .....	584
Preparing for taxation .....	1138
President and the war .....	973
Prestes, Gold Coast .....	367, *790
"Presto" blueprint holder .....	*336
Price-fixing. See also "Minerals Administration.".....	1050
Price-fixing Committee—Copper Conference .....	1050
—Personnel .....	606
Price fixing. Boston News Bureau on .....	1181
—Editorials .....	299, 393, 613, 693, 695
—Sun editorial .....	526
—Platinum. Editorial .....	976
Price of copper and the supply. Editorial .....	1016
Price of manganese ore .....	1175
Price of shameful peace .....	644
Price, W. B. Technical analysis of brass .....	*527
Prices and wages .....	296
Prices, Current .....	43, 311, 491, 778, 903, 1067
Prices, metals	

Page	Page
Pulp, Hydraulically classified—Valve curves.	742
Pulp preparation in flotation.	741
Pulp thickeners in nitrate leaching.	*887
Pump rod repair.	*208
Pump, Bledier.	1031
Pump, vacuum, test.	*205
Purchasing, R. R., centralized.	561
Purington, C. W., Tech. magazines wanted.	1175
Putnam, H. R.	484
Pyne, F. R., Chrome furnace linings.	9, 1083
Pyrifites—Canada, 1917	591
Heap leaching.	882
Import question.	436
Market.	1108
1917 review.	136
Sweden.	932
U. S.	973
Import restrictions.	608
Principal consumers.	287
Survey.	344
Imports and exports.	168, 303
Utah.	1023
Pyrolusite, Sweden.	932
Pyrhotite deposits, Va. S. W.	*198
Pyrhotite open cut mines, Va.	*419
<b>Q</b>	
Quail, Colo.	835
Quaker Valley, Kan.	1193
Qualifications of shift boss.	376
Quarrying, France.	*636
Quarts, Sweden.	932
Quartzites in brick making.	956
Quebec—Accidents, 1917, 597	(errata) 695
Gold.	980, 1148
Magnesite 591	(errata) 695
Queen Bess, Colo.	531
Queen Creek Cop., Ariz.	854
Queen Mine, Ariz.	598
Queensland, Minerals, 1917.	1171
Queneau, A. L.	1146
Quicksilver, Calif., 1917 review.	52
Quicksilver in 1917.	51
Quicksilver metallurgy, 1917 review.	110
Quicksilver, Research work, Calif.	520
Quicksilver, U. S.	315, 649, 841
Quin, L. H., Metal handbook.	1766
Quincy, Mich.	37, 82, 177, 353, 617, 703
Quirk, T. T., Espanola dist., Ont.	1149
Dividends, 1917.	160
By months.	32, 656
Production.	981
Rabb, E. M.	1183, 1191
Radio Mines, Calif.	813
Rafferty, E. C.	896
Rahman Hydraulic Tin.	917
Railroad Administration—Car shortage. Editorial.	764
Express Co.'s merged.	1051
Locomotives ordered.	887
Railroad Wage Comm.—Cost of living.	519
Railroads—Canada.	616
U. S.	1147
Car shortage, Minn.	176
Centralization of purchases.	561
Demurrage charges increased.	167
During war.	753
Eastern freight embargo.	253
Earnings, 1917.	340
Electrification.	434, 646
Freight rates case.	565
Government control.	25, 474
Editorials.	29
State directors not to be apptd.	296
Intermountain rate decision.	298
Labor dilution.	215
McAdoo appoints staff.	341
McAdoo restricts expansion.	607
Mineral freight re-classification.	297
Must hurry bill.	254
Must pay full coal price.	802
Ore freight increase.	344
Rate increase 971, 1050, 1098, 1145, 1147.	1147
Editorial.	1183, 1191
Statistics.	452
30,000 freight cars ordered.	840
Wage advance.	648, 928
Editorial.	935
Railway engineers new regiments.	1142
Rainbow Lead & Zinc, Okla.	82
Rainier Mercury, Ore.	942
Rake off, Colo.	1063
Ralston, O. C.	718, 735, 798
Chemicals in flotation.	798
Ramsay, Sir W., Memorial fund.	454
Ramedell, W. R.	854
Ramstedt, A. P.	688
Rancheria, Calif.	484
Rand. See also "South Af."	
Rand gold deposits.	106
Rand mine workers union, So. Afric.—Wage schedule.	8
Randall, H. E., Electrochemical Works, Can.	441
Randolph Gold M. M. & Tun., Colo.	899, 941, 1025
Rainier Mercury, Ore.	1194
Ransom, R. S., Jr.—Concentrates box.	*294
Shaking screen.	*207
Tungsten determination.	836
Ransome, F. L., Quicksilver.	841
Rapid determination of tungsten.	838
Rappahannock, Calif.	703
Rare Metals Ore, Colo.	263, 909
Baritan Cop. Works, N. J.—Selenium & tellurium.	194
Rausenberger, F., Long-range gun.	754
Raw materials Comm. rept.	212
Rawley, Colo.	531, 899, 1063
Ray Consol., Ariz.	220
Annual report.	884
Dividends, 1917.	160
By months.	32, 656
Ray Consol., Ariz. ( <i>Cont'd.</i> )	
Production.	252, 806, 959, 1101
Quarterly report.	556
Ray Hercules Cop., Ariz.	36, 80, 702, 980, 1063
Ray-Jefferson Mng., Ida.	*82
Ray-Kelvin Mng., Ariz.	981
Ray Silver-Lead, Ariz.	981
Ready Cash, Colo.	813
Real red tapers.	300
Reclassifying drafted men.	1098
Reconstructing the crippled soldier.	1172
Recovering caved stopes in narrow veins.	*1069
Red Chief Mng. & Mfg., Ariz.	1108
Red Chief Mountain, Colo.	447
Red Cloud, S. D.	300
Red Cross campaign.	968, 1008
Tech. magazines wanted.	1175
Red Gap Mines, Ariz.	812, 940
Red Hill Florence Mng., Nev.	83, 1064, 1119
Red Ledge, Calif.	661
Red Monarch, Ida.	1026
Red Mountain Consol., Ariz.	885
Red Mountain Mines, Colo.	447
Red Prince Cop., Ariz.	769
Red Rose, Okla.	814
Red Star Petroleum, Calif.	574
Red Streak Cop. Mng., Nev.	38, 618
Red Top, Nev.	448
Red Warrior, Utah.	1064
Red Wing, Calif.	354
Redfield, Sec., Gold reserve.	1099
Redredging—Will it pay?	*1
Reducito ad absurdum. Editorial.	393
Reeder, A. J.	396
Reese, A. L., Iodide copper method with sodium fluoride.	1170
Reese, P. P.	896
Refineries, Copper and preferred list.	891
Refineries losing men to Govt.	432
Refineries, Petroleum, Kan.	821
Refining of zinc.	1083
Refinery—Mount Elliott, Aus.	188
Refinite Co., S. D.	940
Reforma, Mex.	308
Refractory, Plastic, for boiler baffles.	1049
Refractory properties, Silica.	505
Refractory silica brick composition.	934
Regnelli, R. T.	978, 1060
Regulations, Explosives act.	378
Reid, J. T., Antimony in U. S.	646
Reindeer, Mo.	1150
Reindeer-Queen, Ida.	355
Reinecke, L., Road material surveys.	1766
Reiniger Freeman, Ariz.	940
Renfrew Molybdenum, Ont.	880
Renwick, C. W.	810
Repairing mine cars.	1173
Replacement Regiment.	647
Schools.	802
Repligone, J. L.	572, 754
Reports of mng. companies—Standardization.	825
Editorial.	848
Reports, The right kind. Editorial.	616
Republic, Calif.	1063
Republic Iron & Steel, Ala.	80
Republic Mng. & Mfg. Co., Ga.	15
Requa, M. L., See also Fuel Administration.	753
Appt. Oil Div., Fuel Admin.	167
Calif. oil field wages.	736
On Lever bill.	455
Petroleum Congress address.	682
Photo.	*319
Valuing oil lands.	*544
Rescue apparatus, Gibbs.	*323
Rescue, Nev., Production.	38, 296
Rescue work lectures.	529
Research work organization.	1136
Retort, oil shale distillation.	917
Rette Mng. & Oil Co.	1023
Revelstake Internat. Mng. Conv.	1150
Reverberatory furnaces. See "Furnaces."	
Rex Consol., Ida.	399, 575, 703, 770, 900
Rex Mng. See "Rex Consol."	
Reyer, E. E.	444
Rhee Mng., Ariz.	898
Rheinbold, S. D.	900
Rhodesia Chrome Mines.	23
Rhodesia, Gold.	869
Rhodesian & Gen. Asbestos Corp.	23
Rhodesian mining operations.	573
Rhodocrosite concentration.	578
Rhodochrosite, Mont.	1078
Rhyolite as tube-mill pebble.	1039
Rialto Mng. Co., Okla.	82
Rice, C. T., Binding timbers to truck.	*1132
Chute mouth fixing.	*923
Flotation in the Coeur d'Alenes.	*707
Recovering caved stopes in narrow veins.	*1069
Ridge, Editorial.	1103
Rice, E. W., Electrification of R. Rs.	434, 646
Rice, G. S., Cement gun.	*584, 623
Fuel problem.	432
Rich Strike, Mo.	177
Richards, H. D. C.	174
Richards, J. W. W., Metallurgical calculations.	*766
Richmond, Colo.	1193
Richmond Ida.	770
Richmond Mng., Milling & Reduct., Mont.	82
Rickard, T. A.	1060
Rickard, W. W., Crownning a pulley.	247, 431
Rico Argentine, Colo.	813, 941
Rico, Ariz.	812
Rico Mng., Colo.	941
Rico Oil Co.	810
Rico Wellington, Colo.	941
Riddell-Davison grate.	293
Riddell, G. C.	484
Photo.	*829
Riddell, J. M.	700
Ridder mine, Russia.	275
Ridge & Valley, Utah.	38, 900, 942
Riedler pumps.	1031
Ries, H., Clays of Piedmont, Va.	1766
Rifle output.	474
Ripley, Ariz.	554
Rise in prices. The. Editorial.	508
Rising Sun, Calif.	221
Rival Mng. N. M.	264
Elveting contest.	887, 928, 1009
Knight, C., record.	969
Road building, Amer. sector, France.	949
With tailings.	516
With waste rock.	445
Roanoke Oil & Iron, Va.	942
Roasting furnaces. See "Furnaces."	
Roasting practice, Gold Coast.	367
Roberts, Minn.	447
Robertson, J., Automatic wind-direction recorder.	*995
Draft gages.	*292
Robertson, J. T.	810
Robinson Gold Mng., Transvaal.	425
Robinson, H. A.	572
Rochester-Caroline Mng., N. C.	576
Rock Rose, Mont.	264
Rocks—Table of toughness.	1041
Rocky Mountain Club honors W. B. Thompson	259
Roderick, J. A., died.	351
Roderick, J. E.	1165
Rodgers, G. B.	700
Hooper Crane & Hoist Works.	597
Rogers, A. H.	1002
Rogers, G. S.	107
Rogovin, I. I., Russian platinum.	638
Editorial.	846
Ronpibun Extended, N. L.	917
Rooney, M. A., Coal conservation.	26
Rose Consol., Mont.	1194
Roosevelt Drainage Tunnel, Colo.	177, 399, 575, 661, 855
Roots of the trouble. Editorial.	298
Roxas vacuum pump.	*205
Ropes, Holisting, formulae.	1047
Service and care.	992
Wire, standardization.	608
Ropp furnace.	558
Rosedale Rfg., Kan.	821
Rosengarten, A. G.	927
Rosin in flotation.	101
Ross, E. M.	962
Ross, G. McM., Necessity of gold mining.	204
Ross, R. A., vs. A. C. Burrage.	854
Rough Diamond, Calif.	1108
Round Valley Tungsten, Calif.	81, 574
Roush, G. A.	1190
Rowe mine, Minn., Mng. methods.	*269
Roy, P. S., died.	896
Royal Gem Mng., Colo.	899, 1063
Royal Ont. Nickel Comm.	835
Royal, Okla.	1064
Royal Tiger, Colo.	1109
Royalty lease, Calif.	938
Royalty sched., Minerals Sep.	333
Royster, P. H.	34
Rubber imports restrictions.	930
Rubenson, O. W.	896
Rubidge, F. T.	1002
Ruby Cascade, Colo.	176
Ruggles, G. H.	767
Runkel, F. C.	937
Russell, D. A.	769
Russell, J.	1060
Russell, S. R., Powder in open cut blasting.	601, 1130
Russell, W. C.	1022
Russia. See also Siberia.	
Editorial.	30
Future of.	607
Intervention. Editorial.	1144
Iron ore deposits.	1119
Kyshtim Corp., confiscated.	388
Labor. Bolshevik smelterman's diary.	468
Manganese deposits.	1125
Mineral productions.	596
Mining, 1917 review.	126
Molybdenum.	596
New Russia.	235
Platinum.	128, 377, 638
Editorials.	523, 846
Tungsten.	275
Urquhart on internal situation.	275
Russo-Canadian Devel. Corp.—Takes Irtysh.	445
Rustling card system, Mont.	*479, *752
Ruth flotation machine.	*752
Ruth, J. P., Jr., Flotation machine.	*752
Ruth mine. Caving system.	503
Ruth Pierce, Calif.	81, 531
Rutherford, F.	1002, 1060
Ryan, J. J., died.	1022
Ryan, J. D.	761, 846
Anacinda ferromanganese plant.	677
Career.	875
Criticises govt. methods.	1188
Heads Aircraft Bd.	838
Liberty loan message, photo.	621
On "Influence".	1019
<b>S</b>	
Sachem Iron Co., Minn.	

	Page		Page		Page
St. Joseph Lead Co.	65, *1153	Sharpless, F. F. Professional fees	189	Silver Lead, Mont.	487
—Dividends, 1917	160	War-baby mines	555	Silver-lead smg. works, No. Amer.	63
—By months	32, 656	Sharwood, W. J. Sodium vs. potassium	918	Silver-Metallurgy	645
—Liberty loan campaign	1161	cyanide	1176	—1917 review	102
—Stoping methods	1161	Tungsten in manganese oxide	918	—Mexico, embargo	657
—Table covering	207	Shasta-Belmont, Calif.	36	—Norway	591
St. Keverne, Br. C.	1110	Shasta Hills, Calif.	221	—Ontario	530, 1087
St. Lawrence, Colo.	487, 981	Shasta King, Calif.	675	—Silver ores—Microstructure	106
St. Lawrence, Ida.	770	Shattuck Ariz. Cop., Ariz.	80, 702, 718, 854	Silver Pick Consol., Nev.	982, 1064
St. Louis, Calif.	1063	—Annual report	885	Silver Pt. Mines, Colo.	708
St. Louis Lead & Zinc	1194	—Dividends	260, 843	Silver price, \$1 advocated	352
St. Louis Co., Mont.	38	—Pensions	831	—Price fixing	573
St. Louis County, Minn. Valuation	352	—Production 263, 574, 769, 806, 940, 959,	1101, 1149	Editorial	893
St. Louis Mng. & Milling	261			1917 reviewed	47
St. Louis Smg. & Rfg. Mo.	66, 1155	Shaw, A. W.	803	Silver Purchase Act (Pittman)	804, 926
St. Maurice Mine, Ont.	939	Shaw, E. W.	107	—Editorial	763
St. Nicholas Zinc, N. Y.	576	Shaw, G. E.	218	—Text	757
St. Paul, Colo.	176, 447, 487	Shaw, H.	486	Silver Queen, Ark.	306
St. Regis, Mo.	532	Shaw, S. F.	174	Silver Run, Ark.	306
Saint-Smith, E. C. Geology of Cooktown	766	—Mines data	87	Silver-Sweden	932
Sales, R. H.	1076	Shearer, H. K. Bauxite Ga.	13	—U. S.	45, 47
—Photo	*274	Sheep-ranch Mines, Calif.	855	—Utah	445, 811
Saline Valley Salt, Calif.	398	Sheffield Steel Corp., Ala.	80	—West Australia	8
Saller, M. A.	516	Shelby Chem., Ala.	898	—World production 1917, Mint statistics	47
Salsich, L. R.	978	Shelby Iron, Ala.	80	Silversmith Mines, Ltd., Can.	982, 1108
Salt Lake Chem., Utah	397	Sheldon, G. L.	896	Silverton, Colo., Shipments	35
Salt Lake Filmore & Kenosh R. R.	573	Shells used in offensive	1059	Simonds & Burns, N. Y.	1106
Salt making, U. S.	463, 1936	Shenango Furnace, Minn.	770, 941	Simplified caging with heavy mine cars	559
Sampling methods, Colo.	538	—Butler Bros. suit	221	Simpson, W. E.	939
Samuel, F.	304	Shephard Electric Crane & Hoist Co.	597	Sinclair Rfg., Kan.	821
San Antonio, Colo.	1025	Sheridan, J. C.	661, 937	Sinewald, J. T., Jr. Concentration experiments	936
San Juan district shipments	37	Sheridan, T. F.	978	Sink of Amargosa	*985, *1000
San Miguel, Colo., shipments	219	Sherlock, C. C. Malingering	549	Sloane Mines, Utah	222
San Xavier Exten., Ariz.	940, 1024	Sherman, G. Air-controlled fire-door	559	Siphon to unwater mine	*599
Sand dump, Wind protection	914	Sherman, H.	26	Siredal, Norway	501
Sand pump, Hill Crest, Minn.	271	Sherman, H. S.	978	Situation in lead. Editorial	1143
Sandize, J. R.	839	Sherman, Ida.	263, 614, 617, 938	Situation in tin. Editorials	846, 1017
Sandstorm Kendall, Nev.	982	Shift boss, qualifications and duties	376	Situation in zinc industry. Editorial	807
Sanford, H. W.	927	Ship cost in post war trade	888	Six Points, Colo.	1109
Santa Fe Dredging, N. M.	83	Shipbuilder to build ships	809	Six real savings	548
Santa Fe, Okla.	770, 982	Shipbuilding, N. S.	1148	Sizing, Dry, of feed for concentration	*908
Santa Gertrudis, Annual report	429	—Riveting records	887, 928, 969, 1009	Skead, Ont.	356
—Dividends	32	—U. S.	262	Skeleton Lead & Zinc, Mo.	768
1917	161	April launchings	925	Skinner, R. P. Post-war questions	562
Sargent, Minn.	1110	Strikes delay	27	Skinner enlisted men to return	1096
Sargeon, J.	767	—Welding	927	Skinner, W. R. Mng. Manual	*1105
Sauveur, A.	810	Shipping Board	211	Skip loading—Cal. & Hec.	353
Saving, Hoover on	321	—Achievements	755	Skips—Safety device	*165
Saw, Diamond	*1036	—Concrete ships	802	Slaughter, N. H.	930
Scallion, E. P.	34, 767	—H. H. Raymond app't.	341	Slosser, R. Australian copper costs	1100
Scceptor, Colo.	37	—Needless ocean traffic abolished	649	—Coke breeze in copper precipitation	1090
Schaphorst, W. F. Computing belt in rolls	*883	Schwab's program	1010	Slide Gold Mng., Colo.	941
—Hangar space determination	473	Shipping embargo	649	Slime dam construction, South Africa	932
—Pipe diameter chart	*684	—French	803	Slime treatment, Aguas Santa, Chile	988
Schley, E. B.	528, 700	—Statistics	483	Slimes-filtering screen cleaning device	925
Schlotter ventilator fan	*206	—Submarine losses	341	Sloan, D.	767
Schneider, E. J.	1060	Shipping, U. S.	756	Slocan Star, B. C. See also "Silversmith"	856
Schloch, E. R.	887, 937	Chromite import restrictions	297	Slogan, The. Poem	507
School of Mines, Copiapo, Chile	171	Manganese to go to Fla.	297	Sloss-Sheffield Steel & Iron, Ala.	80
School of Mines, Rilla, Mo.	915	Ships, Concrete	802	—vs. Harrison	425
School, Travelling mng., Nev.	898	—Faith launched	607	Slossen-Symmes interests	1029
Schools for Replacement Engrs.	802	Ships, unsinkable. Editorial	346	Small, C. M.	1060
Schubert, E. A.	1190	Ships will win war	211	Small-pipe connections, Tightening	*516
Schultz, A. R. Phosphate delay	256	Shiras, T. Ark. zinc and lead	*313	Sematite, Ont.	980
Schultz, R. W.	614	—Manganese washing plant	*778	Smeddle, H.	978
Schumacher Gold Mines, Ont.	84, 178, 222	Shooty, Colo.	307, 770	Should U. S. foster domestic antimony?	1088
Schuster, Sir F. War bonds	765	Shovels—Blade angles	*560	Smeeth, W. H.	957
Schuylkill, Mng., Ariz.	940	—300 ton revolving, dimensions	516	Smelter smoke investigations	283
Schwab, C. M.	809, 840, 1010	Shumway oil well, Kan.	*817	Smelting—Colo. investigation	538
—Cost plus* contracts	926	Surick, A. T.	261	Schedule	626
Schwarz, A. Determining new flow sheets	792	Siam, Wolfram	1082	—Cyaniding vs.	454
—Ore concentration patent	560	Siamese Malaya, Tin	917	—Electrical	574
Scientific and Indust. Research Dept., Gt. Br.—Iron ore rept.	1117	Siamese Tin Synd.	917	—Phosphate	879
Scotes, J. S.	1012	Siberia, East. Drift-gravel mng.	*859	—Sweden	638
Scope of miner's employment	373	Editorial	894	—Germany, situation	476
Scotia, Utah	942	Sibley, H.	1098	—Govt. control	574
Scott Mng. Co., Mo.	82	Sicily, Sulphur	911	* S. Editorial	693
Scott, W. G. National defence highways	615	Sickal, C. died	1022	—Indo-China	316
—Top slice stoping	*246, 279, *464	Sidelights on Alaska	797	Smith, A. Indo-China	1012
Scout engineer. Poem	765	Sidney, Ida.	617	Smith, A. H. Transportation	753
Scratch Gravel Gold, Mont.	178, 487, 941	Sierra Asbestos, Calif.	399, 1025, 1109	Smith, B. H.	810
Screen, Shaking	*207	Sierra Central Canal, Calif.	1025	Smith, C. A.	1146
Screens, Slimes-filtering—Cleaning	925	Sierra Devel. Calif.	446	Smith, C. G. Cost accounting	1527
Scale-Sell shear flotation machines	718	Sierra Nevada, Nev. 222, 308, 356, 448, 378,	662, 942	Smith, G. O.	34
Seale & Rader, Mo.	1194	Mng. methods	*1029	—Minerals Admin. testimony	657, 1011
Secondary metals, U. S.	919	ropes	992	Smith, H. De W. W. S. S. at United Verde	947
Secret Pass Gold Top, Ariz.	854	Signal codes in mines	1061	Smith, H. E.	940
Seeger, R. R.	896	Sign switch, Safety	*1133	Smith, J. H. Gravity plane	1064
Seelye, Colo.	855	Silica brick composition	941	Smith Mng. & Devel. Mont.	400
Seip, R. E.	937	—Manufacture	954	Smith, Sen. H. on price fixing	299
Selective flotation. See "Flotation."		Silicon determination	194	Smitther, F. W. Chem. glassware	248
Selenium and tellurium	194	Silk manufacture, Tin in	505	Smoke, Smitther, investigations	283
Selenium, U. S. 1917 review	185	930	Smuggler-Union, Colo., 37, 399, 813, 899, 900,	1149	
Self-acting plane	*164	931	941, 1193	Smuggler-Union, Colo., 37, 399, 813, 899, 900,	1149
Self-feeding bucket loader	*473	Silver Are, Colo.	932	Snyder, F. B.	1192
Selling Australian copper	58	Silver Art consumption	933	Socavon de Providencia, Mex.	308
Seminole Cop., Utah	178	Silver Bell, Calif.	931	Socialism, State and peace	210
Senate passes Silver Bill	804	Silver Bell, Colo.	617	Will it remain?	217
Senator Mng., Ida.	1026	Silver dollars, Converting	840, 926	Society of Chem. Industry	614, 700
Seneca Cop., Mich. 82, 177, 221, 263, 355,	399, 447, 487, 532, 704	Silver Tissue, Mont.	222	Rpts. on progress of applied chem.	*1105
—Shaft	574	933	353	Socorro Mng. & Milling, N. M.	353
Senorito Cop. Co., N. M.	83	Silver Gem Mng., Colo.	899	Socrates, Calif.	1025
Separatator Electro magneto, Bur. of Mines	803	Silver German, renamed	907	Soda feeder	*719
Serbia, A. F. Lucas' Appeal	845	Silver—Flotation	*707	Soda Products Co., Calif.	1061
—Coal, German work	166	Silver Hollow, Ark.	531	Sodium arsenite standard solution tests	409
Sevier, L.	614	Silver King, Ariz.	812, 854, 898	Sodium fluoride, Iodide copper determination	1170
Seward, J.	1022	Silver King Coalition, Utah	488, 810, 1110	Sodium sulphide in flotation	712
Seymour, W.	937	—Conkling Mng. case	701	Sodium tartrate in copper determination	552
Shada Mng. Co., Minn.	82	—Farnon law decision	187	Sodium vs. potassium cyanide	918
Shafroth, Sen.	929	Shade, Oil. See "Oil Shade."	1004	Soldiers' mental tests	616
Shaft cageway covers	*1047	Shale, Oil. See "Oil Shade."	1004	Some economic considerations. Editorial	393
Shaft fireproofing, Anaconda	*1126	Shale—Flotation	*707	Some exper. in heap leaching	*225
Shaft hangar space determination chart	473	Silver Hollow, Ark.	812	Some things to wonder about. Editorial	299
Shaft station, Consol. Interstate-Callahan	*551	Silver King, Ariz.	812, 854, 898	Somers, R. E. Clays of Piedmont, Va.	*766
Shaking screen. See "Screen."		Silver King Coalition, Utah	488, 810, 1110	South Africa. See also "Transvaal," "Rhodesia."	
Shanks process of nitrate extraction	987	—Conkling Mng. case	701	—Conf.	742, 1174
Shannon, C. M.	937	—Farnon law decision	187	—1917 production	1042
Shannon Cop., Ariz.	176, 1114	Shannon King Consol., Utah	140, 356, 488, 814, 1064, 1150	—Corner	742
—Annual report	1006	—Buys Calif.-Comstock	264	—1917	1042
—Production	252, 806, 959, 1101	—Capitalization increase	178	—Diamonds	885
Shannon, J. J.	351	—Dividends, 1917	160	—German interests	888
Shannon, Mont.	264, 400	—By months	32, 260, 576, 843	—Iron ore deposits	1118
Sharpless, F. F. Gold dredging	108				

Page	Page
South Africa ( <i>Cont'd.</i> )	
—Labor	1042
Wage schedule	3
—Minerals	1174
1916	369
1917	742, 1042
—Slime dam construction	932
—Unprofitable mines closed	349
South African Chem., Met. & Mng. Soc.	914
South Amer. Devel.	38
South Amer.—Mining, 1917, reviewed	123
South Carolina—Tin deposits	7
South Chino, N. M.	264
South Dakota, Minerals production, 1917	397
South Eureka-Oneida, Calif.	398
South Hegla, Utah	356, 982
South Lake, Mich., 37, 221, 447, 814, 1064, 1149	
—Report	780
South London, Colo.	1063
South Standard, Utah	618
South Wallingford, Vt., manganese deposits	779
Southeast Missouri, Okla.	662, 900
Southern Graphite Co., Ala.	614
Southern, Kan.	1026
Southern Lead & Zinc, Kan.	400
Southern Manganese Corp., Ala.	80
Southeastern Mo. lead district, 1917 review	65
Southern Mont. R. R.	979
Southern Sierras Power Co.	897
Southwestern Graphite Co., Tex.	83
Space determination chart, shaft hanger	473
Span—Gold basis	1053
—Graphite deposits	
—Iron ore, analysis	
Deposits	
—Potash deposits	643
Specimen and Sacramento, Colo.	177
Spectroscope—Use in lead determination	163
Speculation—Gold and base metal mng.	430
Spektor statistics. Editorial	169
Speiter—U. S., production, 1913-17	68
Spencer, A. C.	1002, 1003
Geology, Nev.	105, 776
Sphalerite in ores	173
Spicer, Mrs. H. N.	930
Splegeleisen data	75
—1917 review	75
Spilsbury, P. G.	1002
Spirlet furnace	97
Spokane Lead & Silver, S. D.	83, 704
Spokane tin mines	938
Sporting Boy, Calif.	221
Sprague Electric Works	597
Sprague, C. B., died	1140
Sprague, H. E., died	304
Sprague, T. W., died	34
Spreckles, C.	26
Spreckles, I. D., Jr.	1061
Springer, J. W., Zinc determination	386
Springfield Tunnel & Devel., Calif., 37, 354, 446, 768, 855, 1025	
Spurr, J. E.	351, 841
—Minerals Admin.	690
Square Deal Gold Mng. vs. Colomo Mng.	810
Squaw Peak Mng., Ariz.	1108
Staffordshire iron ore deposits	1118
Stamp shoe mfr., Transvaal	425
Standard Chem., Colo.	487, 1026
Standard Magnesite, Calif.	574, 899
Standard Min. Separation. See "Minerals."	
Standard Oil Co.	175
Standard Oil, Calif.	573
Standard Oil, Kan.	821
Standard Silver-Lead, B. O.	982
Standard Tungsten Co.	81, 938
Standard Zinc Co., Ark.	80
Standard Zinc Lead Mng., Okla.	82
Standardization, Assaying methods	1024
—Mine accident reports	1165
—Reports for mng. co.'s	825
Editorial	
Standards Bur.—Chem. glassware	248
—Work	4
Stanislans Devel. Co., Calif.	36
Stannard, E. T., marriage	1146
Stansfeld, A.	513, 1145
Stanton, Mont.	38
Staples, production, 1917	166
Star Mng.—Fed. Mng. case	660
Star of the West, Colo.	447
Star City, Mo.	900
Star, J.	887
State distribution of war minerals	520
State geologists, list	150
State safety news	1350
State socialism. See "Socialism."	
Statistical number	45
Steam in filtration	725
Steam-shovel mng., Mesabi. *403, *493, *508, *779	
Editorial	
Steam shovel ore car	524
Steam-shovel, Polk-Southard, Ark.	*416
Steel after the war	387
Steel—Canada	262, 688, 1062
—Effect of copper	871
—Gt. Britain, 1917	1041
Procedure to obtain	
Steel-krip glove	789
Steel-maitland, Sh. A. D.	*1049
Steel men pledge output	755
Steel—Pershing's supply	886
Steel prices	754
Steel survey planned	648
Steel, U. S.	971
—Supply	72
Steele, H. J., died	1038
Steens Hollow district, Calif.	614
Stellite	37
Stemwinder, Mont.	38
Stonhenson, L. died	614
Stonhenson, Mich.	37
Starling Silver, Wash.	83
Starnott, J. E.	688
Stattinines, W. R.	387
Stevens Inst. Tech.	1097
Stevens, J. F.	25
Stevens, H. B., Labor in shipyards	27
Stewart, J. Drill hole marking	798
Stewart, L.	978
Stewart, R. H.	700
Stewart, W. A., Chrome production	967
Stibnite, Electrolytic antimony from	10
Stillman, E., died	24
Stillman, T. B., Engineering chemistry	*527
Stockett, A. W.	1012
Stocks, mng.—Boston Exchange	86
—N. Y. Curb, 1917	85
—N. Y. Exchange, 1914-17	84
Stoddard Mng., Ariz.	717
Stokes, H. L., Rhodesian mining	23
Stone, G. C., Ferromanganese and spiegeleisen	75
Stone, R. W., Bromine, 1917	587
—Magnesite deposits, Wash.	*665
—Phosphate rock, 1917	1079
Stoping costs, Cordova, Ont.	22
—Incline top slicing	279
Stoping methods—Incline top slice, *246, 279	*464
—Recovering caved stopes	*1069, 1103
St. Joseph, Mo.	1161
Storage, Coal	*601
Storrow's common sense. Editorial	347
Stoughton, B.	1083
Stovet, J. H.	810
Strachan, F. J.	700
—"Straits tin." See "Siamese Malaya."	
Stranahan, Colo.	1063
Strathcona Park amendment act	939
Stratton, S. W.	1136
Street, A. L. A. See "Law decisions."	
Strike bill passed	518
Strikes. See "Labor."	
Stripping anthracite	190
Stripping equipment, Mesabi	*496
Strong, Colo.	177
Strontrium, U. S., 1917 review	135
Stull sets in stoping	*1072
Submarine losses	341
Success Mng., Ida., 35, 219, 221, 399, 457,	
770, 853, 708	
—Report	618
Sudbury dist., Can.	1108
Sudbury ores, Platinum in	835
Sufficiency of assessment work	630
Sulman & Picard, Fine grinding of zinc charges	883, 1175
Sulphide Corp., Aus.	739, 939
Sulphide mineral flotation	738
Sulphides in ores	173
Sulphur analysis	385
Sulphur dioxide in copper determination	162, 553
—Italy, embargo	138
Sulphur oxide determination	372
Sulphur regulation	1182
Sulphur, Sicily	911
—Treatment plant, Tex.	*466
—U. S.	973
Sulphuric acid—Flotation	712
—1917 review	59
—Phosphate mfr.	283
—U. S.	973
—1917 production	471
Transportation	471
Utah	1022
Sultan, Nev.	618
Summers, L. L.	927
Summit Cop. Mng., Colo.	176, 1063
Sun, N. Y.—Crowell cuts red tape	*237
—Editorial on Pres. Wilson	242
—Editorial on taxation	1086
—Mexico's relapse	334
Sunflower Mng. & Mfg., Kan.	1028
Sunnyside, Calif.	617
Sunnyside Mng. & Milling, Colo., 81, 769, 899, 941	
Survey, Geological—Alaskan chromite deposits	777
—Annual rept.	*936
Superior. See "Lake Superior."	
Superior, Mich.	37, 855
—Production	814, 1026, 1149
Surf Pop, Ark.	981
Surf Inlet, B. C., Flotation practice	*720
Surface plant, Union mine, Nev.	*1030
Survey, Geological—Alaskan chromite deposits	777
—Annual rept.	*936
Caliche deposit, Calif.	28
Chromite prod. inadequate	335
Deepest well	591
Domestic platinum	991
Gas wells and overdrilling	835
Petroleum withdrawals	315
Petroleum, Wyo. report	23
Quicksilver, U. S.	841
Secondary metals, U. S.	919
Sulphuric acid, U. S., 1917	471
Susannah, Utah	1064
Suwance Iron Co., Ky.	703
Swain, G. F.	891
Swanson, Ariz.	1063
Swastika Mng., Colo.	1064
Sweden—Iron deposits	1002, 1119
—1917 production	691
Imports and exports	789, 1171
—Minerals and metals	932
Oil slate development	1186
Sweeney, O. R., Sulphur dioxide determination	162
Switch, Derailing	*515
Sybil, Calif.	813
Sylvanite, Colo.	703
Sylvanite Gold Mines, Ont.	84
Swennes, W.	1029
T	
Table covering	207
Table Mountain Gold Mng., Calif.	855, 1025
Table Rock Mng., Calif.	1025
Tailings—Air lift for handling	*1177
Road building with	516
—Screen tests, Utah Lsg.	*535
Table and flotation curves	742
"Taking over" by the govt.	498
Talbot, A. W.	218
Talbot, R. S.	553
Talc, Vermont, 1917	406
Talladega Graphite & Prod., Ala.	898
Talladega Iron, Ala.	80
Talon, H. H., died	937
Tamarack & Custer Consol. Mng., Ida.	82, 710, 938
—Dividends	1019
Tamper, Mechanical, in track work	*1048
Tanawha, Calif.	531
Tanner, W. N.	528
Tar Kiln, Ark.	.940, 1025
Tarbox Mng., Mont.	356, 487, 1026
Tariff Commission	930, 1191
Antimony conference	1059
Metal industries and	*828
Tasmania, Minerals, 1917	1032
Taussig, F. W., Photo	*829
Taxation—B. C.	.812, 939
—Colo.	897
Gt. Britain	802
Mexico	150, 657, 793, 889, 956
Mining industry	563, 1139
—U. S., 202, 390, 563, 573, 701, 839, 1138,	1139, 1147
A. I. M. E. report	639
Amer. Mng. Cong., Utah Chap.	35
Barron, C. W., on	1096
Editorials	975, 1087, 1187
Excess profits law	173
Excess profit tax reviewers	688
Gold mng. and	873
Income tax regulations on mines	301
Joplin operators want amendment	446
Sun editorial	1086
Supreme Ct. decision	1097
Zinc tax opposed	1183
Utah	811
Taxing program. Editorial	1018
Taylor, B. F., died	34
Taylor, R.	1106
Teas, L. P., Sphalerite in ores	173
Technical engineers, Conservation	1055
Technical men needed	588
Teck Hughes, Ont.	53, 178, 356, 662, 900
Teddy Bear, Colo.	.617, 855, 1025, 1109
Teknik Club	1022
Telescope, Colo.	37
Teller, Colo.	.813
Telluride dist., Colo., shipments	447, 617, 941
Tellurium and selenium	194
Temiskaming & North, Ont. R.R. Comm.	Rept. #1936
Temiskaming, Ont., 36, 178, 400, 662, 704,	856, 982
—Annual report	308, 556
—Hoover mine	264
—Shareholders' meeting	530
Temperature, High—Effect on workers	908
Temple Mng., Ark.	531
Templeton, A. A.	1098
Tenderfoot Mng., Ont.	618
Tennessee Coal, Iron & R.R.	220, 795, 898, 1106
Tennessee Cop. & Chem. Co.	488
Dividends	1019
Tennessee, Manganese	530
Tennessee, Manganese Co.	488
Tennessee, Mo.	532
Tennessee—Open cut mng. views	284
Tennessee Prod. Co.	*284
Terrible, Colo.	1025
Terry Tunnel, Colo.	1109
Tests for flotation oils	1043
Texas & Nogales Mng., Ariz.	898
Texas Cop. & Rfg. Co.	488
Texas, Okla.	982
Texas School of Mines	*984
Thackeray, Ont.	814
Tharsis Sulphur & Copper Co., Annual report	1180
Thawing frozen ground by hot water	*20
Thayer, B. B.	852
—Butte district	57
Thayer, W. N., Ky., oil fields	*781
Theory and practice of ball-milling	*569
They call them devil-hounds. Poster and editorial	1143
Thief knot	158
Third Liberty loan. See "Liberty."	
Thirty-Third Engrs.	255
Thomas, C. S.	1010
—On Silver bill	804
Thomas Cruise Devel., Mont., 178, 308, 400,	618, 704
Thomas, J. E.	932
Thomas, K.	351, 1190
Thompson, A. B., Oil field development	107
Thompson, A. S., Zinc tax opposed	1183
Thompson, J. W., Abstracts of current decisions	*1350, *766
Thompson-Krist, Ont.	.356, 814, 856, 909, 1026
Thompson, P., Gas and oil fields, W. Can.	1099
Thompson, W. B.	34, 444, 761, 977
—New Russia	235
Editorial	259
Printed in Cong. Rec.	300
Rocky Mt. Club honors	259
Thorium, U. S., 1917 review	135
Thornberry, M. H., Addition agents in flotation	*915
Three Forks Mng., Mont.	662
Three Hundred and Nineteenth Engrs.	445
Three Kids, Nev.	*775
Three Kings, Utah.	.178, 264, 356, 400
Three Sevens Gold Mng. Co.	221
Three Star, Ont.	856
Tie-tamers, Mechanical	*1048
Tightening small-pipe connections	*516
Timber, Mine	34, 701
Timbering in recovering caved stopes	*1069
Times on "experts"	809
—On Schwab	874

Page	Page
Timmons, C. ....	854
Tin Bentong, N. L. ....	917
Tin—Bolivia, marketing.	1014
Refining in Chile	
—China, 1917	
—Conservation	
—Contained substitute	
—Gt. Br., control	
—Holland, Embargo	
—Market, 1917	
—Pic, Export regulations.	
Status defined	
—Plate restrictions	
Queensland	
—Scarcity, Editorial	
Siamese Malaya	
Silk mfr.	
Situation	
Editorial	
South Carolina deposits	
S. D., Black Hills deposits	
U. S. Conservation	
Consumption, 1917	
1917 review	
1900-1917	
Shipment advice	
Situation	
Imports and exports.	
—Va. ....	*5
—Valuation of manganese ores	
—Wash.	
World production	
Tintic Central, Utah. ....	567
Tintic Delaware, Utah. ....	618, 856
Tintic Drain Tunnel, Utah. ....	83, 618, 814
—Wage payment	
Tintic Mfg., Utah. ....	814, 979
Tintic shipments	
356, 400, 662, 1150, 1194	
Tintic Standard, Utah, 38, 356, 488, 532, 576,	
618, 814, 1110	
—Dividends, 1917	
By months	
—Production	
Tinton, S. D. ....	1110
Tioga, Minn. ....	770
Tip Top Consol., Ariz. ....	769, 1024
Tip Top Mng., Ont. ....	84
Tippett, J. M. ....	744
Titanium ore deposits.	
Titanium, U. S., 1917, review	
Tobin, R. J. ....	1061
Todd-Stambaugh Co. ....	74
Tofo iron mines, Chile. ....	1140
Tolman and Rogers, Magmatic ores. ....	106
Tom Reed Gold Mines, Ariz. ....	
80, 220, 702,	
769, 812, 854, 898, 1108	
Tomboy, Colo., 307, 355, 531, 617, 813, 855,	
899, 941, 981	
—Annual rept.	
—Dividends, 1917	
By months	
Tomlin, R. K., Jr., French quarries. ....	*636
Road building, Amer. sector, France. ....	949
Tongkah Harbor Tin Dredging, N. L. ....	917
Tonkin, Indo-China—Zinc smelting. ....	316
Tonopah Belmont Devel.—Annual report	
1135	
—Dividends	
—Production, 38, 178, 222, 356, 488, 532,	
618, 662, 704, 770, 814, 856, 900, 942,	
982, 1026, 1064, 1101, 1150	
—Surf Inlet flotation practice. ....	*720
Tonopah Exten., Nev. ....	576, 1110, 1150
—Annual report	
—Production, 38, 178, 222, 356, 488, 532,	
618, 662, 704, 770, 814, 856, 900, 942,	
982, 1026, 1064, 1101, 1150	
Tonopah Mng., Nev. ....	1150
—Dividends	
—Production, 38, 178, 222, 356, 488, 532, 618,	
662, 704, 770, 814, 856, 900, 942, 982,	
1026, 1064, 1101, 1150	
Tonopah Placers Co. ....	109, 307, 487, 1109
Tools, Govt. appeal. ....	153
Top slicing. See "Stoping."	
Torkelson, J. T. ....	789
Torrance, R. M. ....	927
Tough Oakes, Ont. ....	264, 576
Toughness test, tube-mill pebbles	
1037	
Towsley Gulch, Mont. ....	941, 1110
Tracing cloth fastener. ....	600
Tracing paper, Drawings on. ....	247
Track work—Mechanical tampers. ....	*1048
Trackage system, Mesabi open-pit mine. ....	*580
Tractor, Versatile. ....	*1004
Trade agreement, U. S.-Norway	
Trade conditions, Germany. ....	839
Trade Inform. Comm. ....	1091
Trade war, Business favors. ....	474
Trademark, National. ....	1051
—Amer. Ch. of Commerce, London, oppose. ....	1081
Trail Smeltery, B. C. ....	262
Train, A. ....	977
Train alarms and lights. ....	*21
Trained men for war work. ....	1015
Training, First aid. ....	252
Training in efficiency. ....	200
Tramway, Climax Molybdenum, Colo. ....	*905
Transit, Gurley-Needle variations. ....	21
Transportation rate increase. ....	971, 1050
Transvaal. See also "South Africa."	
Transvaal Chamber of Commerce, Wage schedule. ....	3
Transvaal—Gold	
Deposits	
1917 production	
1887-1916	
—Labor data	
—Mineral production, 1917.	
—Mng., adverse factors.	
1917 review	
—Stamp shoe mfr.	
Traphagen, F. W. ....	218
Trapshootters' Oil Co., Kan. ....	*818, 820
Trauerman, C. ....	573
Travers. Determination of manganese. ....	248
Traylor, J. A. ....	700
Treasure, Calif. ....	768
Treasurer's report—Standard form. ....	826
Treatment of flotation concentrates. ....	*1177
Trestle bent, Mesabi. ....	*917
Trethewey, Ont. ....	178, 576, 737, 814
Triangular system, Paloma	
Treatment	
—Annual report	
—Buys Castle Mng.	
Treazona, R. R. ....	222
Tri-State Chrome, Ore. ....	942, 1194
Triangle Mine Safety & San. Assoc. ....	1191
Triangle, Utah—Blasting case decision. ....	327
Triangulation system, Paloma	
Treatment	
—Annual report	
—Buys Castle Mng.	
Trotline, L. W. ....	164
Trolley line cutout. ....	*291
Trona Co., Calif. ....	574
Troubles in flotation. ....	738
Troy Ariz. ....	398, 486
Trucks, Army—Overland runs	
—Copper sheet	
Dividends	
True Blue, Okla.	
Truing, crankpin	
Trumbull, L. W. ....	937
Tube-milling—Artificial pebbles. ....	*1033
Tubrodesia. ....	245
Tuckahoe—Editorial	
Tucker, S. A. ....	927
Tucker, W. A. ....	398
Tulsa-Sapulpa-Miami, Okla.	
Tungsten. See also "Wolframite."	
—Calif. deposits	
—Colo. ....	263
—Gt. Br. restrictions	
—Ida.	
—Manufacture, Widnes, Eng.	
—Market	
Tungsten Mines Co., Calif.	
Tungsten—Rapid determination	
—Russia	
—U. S. Imports and exports	
Tungstenite—a sulphide of tungsten	
Tunis, Iron ore deposits	
Tunnel driving, Rapid, Armstead mines	
Tunnel Petroleum, Calif.	
Tuolumne Mng., Mont.	
—Annual meeting	
Turkey, Mining	
Turner, O. A., died.	
Turner, R. R., Device for hastening filtration.	
Turner, S. ....	937
Turning over a new leaf. Editorial	
Turpentine in flotation.	
Turret Cap. Mng. & Rfg., Colo.	
Tuscany, Cinnabar	
Twenty-seventh Engineers—Comfort Club, 32,	
172, 217, 260, 302, 349, 392, 440, 479,	
521, 567	
U	
Ugalde, N. ....	990
Ulrich, C. T. ....	978
Ultra violet rays harmful.	
Uncle Sam, Colo. ....	369
Underhill, H. J. ....	1149
Underwood, F. L., died.	
Underwriters, Mo. ....	304
Union Amal., Nev. ....	614
Union Amal., Nev., 222, 400, 448, 532, 576,	
618, 704, 770, 814, 900, 941, 982, 1026,	
1110, 1194	
Union Basin Mng., Ariz. ....	176
Union Consol., Nev., 175, 222, 264, 308, 356,	
448, 485, 576, 662, 704, 853, 942, 1147	
—Dividends	
—Mng. methods	
Union Constr. Co., Calif. ....	1147
Union Miniere du Haut Katanga—Mining operations	
1167	
—Production, 38, 178, 252, 806, 814, 950,	
982, 1108, 1150	
Union Oil Co., Calif. ....	529, 853
United Alloy Steel Corp. ....	1171
United Chino Oil & Rfg., Ariz. ....	1063, 1108
United Comstock Pumping Assoc. ....	*1029
United Eastern Mng., Ariz. ....	
80, 220, 769,	
812, 854, 898, 1024	
—Construction costs	
—Dividends, 1917	
By months	
—32, 260, 440, 656, 843, 1019	
261	
United Engr. Soc., Officers. ....	261
United Gold Mines., Colo., 307, 661, 770, 813,	
1064, 1109	
United Gold Mng., Ore. ....	83
United Kingdom—Asbestos	
—Bismuth	
—Coal, Conservation by electrification	
—Miners drafted	
—Copper sulphate	
—Govt. control	
—Industrial safeguards	
—Iron ore. Report of Advis. Coun.	
Steel, 1917	
Procedure to obtain	
—Labor	
—Manganese resources	
United Kingdom (Cont'd.)	
—Mineral production, 1915, 1916.	506
—Munitons	
—Petroleum	
—Taxation	
—Tin control	
—Tungsten restrictions	
United Mines, Mont.	
United Nevada	
United Oatman, Ariz.	
United Prod. Smg. Co.	
United Shoe Mach. Corp.	
United States. (Productions and other matter.)	
See also "Bureau of Mines," "Survey."	
"Geological" etc., etc.	
—Aluminum, 1900-1917	567
Price fixed	
Salts, 1917	1003
—Antimony	
Conference	
Should it be fostered?	
—Arsenic	
1917 review	1059
—As employer	
—Bauxite	
—Bismuth	
—Bromine, 1917	134
—Cement, production	
1917 review	1139
Production and distribution	
Shortage	256
—Chromite, production inadequate	
Imports restricted	335
—Coal. See also "Fuel Admin."	45, 802
Anthracite allotments	
Bituminous	
Coal week	
Conservation	
Distribution	
Exports to Canada restricted	
Mine facilities, 1917	
Preference list	
Production	
What caused crisis	
Trade wants binding contracts	
Want drafted miners returned	
Zone distribution system	
—Copper	
Cost. Editorial	252, 806, 1101
Freight increase	
Import restrictions	
Production, 1917	
Imports and exports, 17, 302, 395, 835,	1041, 1141
1916, 1917	53
Economic statistics	
Export restrictions	
Gold	
Industry and standard	
Mining, Editorial	
Not curtailed	
1914-1917	928
Graphite	
1917 review	869, 1079
Import restrictions	
Iron, deposits	
Iron and steel production	
Situation	
1917 review	74
Import restrictions	649
Pig iron	
1917	668
Price	
U. S. Steel report	
Imports and exports	
Labor. See "Labor."	
Lead, production, 1913-17	61
Editorial	
Freight increase	
Imports and exports, 17, 303, 424, 761,	1003, 1141
Lime, 1917	914
Manganese	
Districts	
Editorial	
Import restrictions	
1917 review	
Price schedule	
Editorial	
Producers and consumers	
Imports and exports	
Labor. See "Labor."	
Freight increase	
Imports and exports, 168, 303, (erratum) 344, 349, 522, 892, 1141	1098
Minerals. Editorials	
Mining, 1917 review	112
Molybdenum, 1917 review	92
Monazite, Imports restricted	
Norway trade agreement	
Ores. Imports and exports, 1917, 303, (erratum) 349	971
Palladium, 1917 review	
Commandered	
Editorial	
Search for new pools	
Situation	
Phosphate rock, 1917	
Western delay	
Platinum, 1917	991
Commandered	
Editorial	
Price fixing. Editorial	934

Page	Page	Page	
United States ( <i>Cont'd.</i> )			
—Potash	398	War Ind. Bd. ( <i>Cont'd.</i> )	
Lands opened	841	—Cop. and zinc conference	217
1917 production	1142	—Directing agency	756
—Pyrite	973	—Directors	1098
Import restrictions	608	—Editorial	524, 1102
Principal consumers	287	—Foreign clays	803
Survey	344	—Iron price	1184
Imports and exports	168	—Machine tool appeal	153
—Quicksilver	315, 649, 841	—Manganese price schedule	1053
—Railroads. See "Railroads."		Editorial	1057
—Salt	463	—Nickel price	1012
—Secondary metals	135	—Non-essential construction	649
—Selenium, 1917 review	919	—Organization chart	289
—Silver	45, 47	—Pershing gets steel	754
Spelter production, 1913-17	68	—Priority regulations	343
—Strontium, 1917 review	135	—Steel price	28
—Sulphur	973	—Steel supply	1098
—Sulphuric acid	973	—Tin conservation	803, 1185
1917 production	471	—Tin in silk mfr.	930
Transportation	471	—War industries survey	969
—Taxation. See "Taxation."		—Zinc price	1012
—Thorium, 1917 review	135	War Labor Bd. See "National."	
—Tin conservation	1138, 1185	—Appointment	686
Consumption, 1917	958	—War loan statistics	838
1917 review	59	—War metals salvage	380
—Uranium, 1917 review	135	—War minerals—Appropriation	1183
—Vanadium, 1917 review	135	—Distribution	520
—Zinc. Editorial	694, 807, 1018, 1191	War Minerals Comm.—Minerals Admin. Bill,	
Situation	1191	—Mines administration bill. Editorial	298
Smelting capacity	69	—Proposed mines administration. Editorial	571
Imports and exports	17, 69, 303, 424, 761, 1003, 1141	—Pyrite in 1917	287
—Zirconium, 1917 review	135	—Pyrite consumers	287
U. S. Chamber of Commerce	801	War minerals discussed at luncheon	633
—Americanization	801	War risk insurance	734
—Daylight saving	519	War Savings Stamps	475, 689
—Favors trade war	474	—Fed. mng. campaign	616
—Water power legislation urged	649	—Joplin dist. campaign	1147
U. S. Gypsum Co., S. D.	83	—United Verde	947
U. S. Metals Refg. Co.:		—War to transform unionism	1137
Hygiene for lead workers	384	War Topics. See also "Shipping Bd.", "Fuel Adm.", "War Ind. Bd.", etc. etc.	474
—Laboratory, Chrome, N. J.	*451	—Business favors trade war	
U. S. Smelting, Refining & Mining. (See also "Mammoth")	38, 146, 399, 940, 1149	—But the Engineers	
Annual report	884	—Chromite prod. inadequate	335
Dividends	260, 843	—Cost	340
Production	354, 574, 769	—Crisis. Editorial	218
U. S. Steel Corp.	928	—Crowell cuts red tape	237
—Annual report	794	—Daylight saving	519
—Service flag	31	—Direction of the war. Editorial	258
—Wage increase	648	—Drafted men reclassified	1098
U. S. Tariff Commission. See "Tariff."		—Engineer officers wanted	1095
U. S. Vanadium	36, 80, 354, 486, 940, 981	—Expansion of old bureaus preferred	344
U. S. vs. Calif. Trona Co.	907	—Financing our second year	834
United Tungsten-Cop., Calif.	981	—Food a mighty weapon	518
United Verde & Pacific R. R.	892	—For consideration of Gen. Staff	483
United Verde, Ariz.	220, 1063, 1114, 1192	—Foreign trade	210, 390
—Dividends, 1917	161	—Foreign trade Sec. for Cabinet	887
By months	32, 440, 656, 843, 1019	—French lumber shortage	210
—Freight rates case	565	—German long-range gun	754, 1104
United Verde Cop.—Liberty loan	892	—Germany seeks Caucasus manganese	927
—War Savings Stamps	947	—Giant ordnance plant	928
United Verde Exten. Mng.	80, 307, 398, 767, 1114, 1149	—Gold movement	886
—Annual report	1093	—Gold stock threatened	610
—Dividends	440	—Gun division to expand	610
—Production	220	—Hoover favors minerals admin.	689
United Zinc Smg. Corp.	68, 83	—Hoover on buying monopoly	801
Universal Electric Welding Co.	927	—Hoover on saving	321
Unsinkable ships. Editorial	346	—Housing problem	608
Unwatering—Cementation in Ill. oil fields	*1080	—Imports control	435, 840
—Comstock lode	*1029	—Light breaks. Editorial	893
Siphon	599	—Magnesium in war	135
Urad Mines, Colo.	703	—Major things	760
Uranium, U. S. 1917 review	135	—May control lumber	518
Urquhart, L. Irtysh devel. and Russian situation	275	—Must maintain gold reserve	561
Utah Apex, Utah	141, 856, 1110	—Nations at war	187
Utah. Coal	400, 485	—Naval Appropriation Bill	888
Utah Consol., Utah.—Dividends, 1917	161	—Ordnance dept. reorganizes	166
By months	32, 576, 656	—Pershing gets steel	754
Utah Cop. Co.	141, 448	—Platinum commandeered	476, 605
—Annual report	1092	—Production must be balanced	478
—Dividends, 1917	161	—Reconstruction of crippled soldiers	1172
By months	32, 656	—Registration day	474
Labor	445, 768	—Rifle output	298
Leaching plant	1061	—Roots of the trouble. Editorial	838
Paintings by J. Lie	*18, *19	Ryan heads Aircraft Bd.	838
Production	252, 400, 806, 959, 1101	Senate against efficiency	1010
Quarterly report	592	Serbian coal	166
Taxation case	615	Ship launching in April	928
—Wage increase	352	Shipping capacity	348
Utah Council of Defence	1107	Ships will win	211
Utah Elaterite, Utah.	900	Skilled enlisted men to return	1096
Utah Fertilizer & Chem.	618	Some things to wonder about. Editorial	299
Utah Fuel Co., Utah	88	State socialism and peace	210
Utah—Labor	445, 615, 811, 853	Steel after the war	387
Wage increase	352	Steel men pledge output	886
Utah Leasing Co.—Flotation plant	*535	Strikes delay ship building	27
—Flotation practice	*724	Submarine losses	341
—Report	618	Sun edit. on Pres. Wilson	242
Utah Metal & Bingham Canyon Tunnel, Utah	141	Trained men lacking	1015
—Dividends, 1917	161	U. S. as employer	1128
By months	32	War Cabinet to meet weekly	606
Production	1110	War Dept. inefficiency	27
Utah Mine, Utah	576	War Dept. reorganized	209
Utah—Mineral land decision	352	War loan statistics	838
Utah Mineral Paint	618	War metals prices	980
Utah—Mining, 1917 review	140	War taxes spent as received	888
Utah Oil Men's Assoc.	896	What the R. Rs. have done	753
Utah Oil Shale, Utah	532	Whose war is it? Editorial	611
Utah, Potash	1061	Will restrict coal to Canada	928
—Pyrite	1023	Will spend \$400,000,000 on buildings	563
Silver	445, 811	Year's expense below estimate	687
Utah Soc. of Engrs.	810	War Trade Bd.—Copper imports restrictions	1183
Utah—Sulphuric acid	1022	Export Licences	343, 968
—Taxation	811	Import restrictions	1010
Utah Zinc, Utah	704	Imports not absolutely prohibited	689
		License agents unnecessary	688
		Metal export to Norway	297
		Monazite sand restricted	1184
		Rubber imports	930
		Ward, C.	1191
		Ward-Hopp case	1062
		Ward, Nev.	1064
		Waring, W. G.	729
		Zinc ores, Joplin	280

Page	Page
Warner Marble, Calif.	855
Warren, H. B., died.	659
Warrington, W. H.	937
Warrior Corp., Ariz.—Dividends, 1917 By months	161 52
Wartenweller, O. Unit. East. Constr. costs.	294
Wasapika, Ont.	982
Wasatch—Colo. Mng., Colo.	37, 813
Wasatch Mines, Utah	448
Washburne, C. W., marriage	896
Washing gold, Yangtze Kiang	793
Washing plant, East Siberia	*861
—Manganese, Eureka mang., Ark.	*778
Washington, Law	397
—Manganese deposits	1082
—Magnesite deposits	*665
Washington Metal Mine Owners' Assoc.	1148
Washington Placers, Colo.	1109
Washington School of Mines	34
Washington—Tin	938, 1062
Washington Univ. College of Mines	1054
Washington Water Power	397
Waste. Editorial	694
Waste in boiler rooms	†1105
Water-blast apparatus, Apex	*922
Water flow chart	*684
Water flow, effect of mouthpieces	383
Water in flotation	736
Water-power bill	338
Water power legislation urged	649
Water supply, Calif.	1147
Waterbury, A. L.	659
Waterhouse, G. B.	971
Watkins, F. M.	1060
Watkins, J. A. High temperature effect on workers	998
Watson, C. N.	396, 1022
Watson, H. C.	1022
Watt, A. P.	174
—Concentration practice, S. E., Mo.	364
—Table covering	207
Waupaca, Mich.	82
Wawbeek, Mich.	355
Waxahachie, Okla.	982, 1150
Wayland Mng., Mo.	486
Webb, C. N. Keeping down the costs.	613
—Matt., the Finn	171
—Mine chemist	31
Webb, H. H.	596
Weed, W. H.	1079
Weidenthal, H. G.	852
Weidlein, E. R.	927
Weights and measures, Japan	1075
Weinberg, G. S.	34
Welch Manganese, Calif.	1025
Weld, C. M. Cuban iron ore.	1002
Welding, Electric, in shipbuilding	927
—Ultra violet rays harmful	369
Welfare, Mining-camp	798, 830, 883
—Boarding hotel, B. C.	1090
—Duluth housing scheme	1102
—Future generation and	1131
—Kerr Lake cafeteria	*946
Well, Deepest, in world.	591
Well spacing	545
Wellington, Colo.	447, 487, 575, 661, 813
Wells, A. E.	1064, 1109
—Minerals-Control testimony	218, 927, 929
Wells, B.	650, 855
Wells, R. C. Extraction of potassium salts.	670
—Tungstenite	441
Wendel, Baron de	1059
Wenden Corp., Ariz.	940
Wenz, O. F.	34
Werner, J. W.	818
West Dome, Ont.	38, 178, 222, 704, 982, 1194
West End Consol. Nev.	982, 1150
—Dividends	440, 656
—Production	38, 178, 222, 356, 488, 532, 618, 662, 704, 770, 814, 856, 900, 942, 982, 1026, 1064, 1101, 1150
West United Verde Corp., Ariz.	446, 1114
Western Australia—Mineral production	8
Western Chem.-Prod., Calif.	1063
Western Fed. of miners.	175
Western Magnesite Co.	1025
Western manganese	549
Western Ore Co., Calif.	354, 398, 661, 703
Western Ore Purchasing Co.	1186
Western Utah Corp.	178, 306, 397, 900
Western Utah Exten. Corp., Utah	448, 900, 1064
Westervelt, W. C. See also "War Minerals."	
—Minerals administration	760
—Photo	819
Weston, E. M. Apex water-blast apparatus	*822
—Fuse Ignitor	*1046
Wettengel, C. A. Zinc metallurgy	558
Wettstein, J. R. Lead products	63
Wewissa, Colo.	1025
Wharton Steel Co.	572
What caused coal crisis?	320
What is labor unrest? Editorial	417
What one man has taken on himself to do	242
What the railways have done	753
What was the cause? Editorial	170
Wheeler, H. and Bisbee deportations.	1055
Wheeler, H. A. Oil and gas fields, Ill.	*181
—Southeastern Mo. district	65
Wheirdale, Ont.	488, 1026, 1064
Whitaker, O. R.	32, 1106
—Colo. smelting investigations	558
Whitaker, W. A. Petroleum in Kan.	*817
White Caps Exten. Mng., Nev.	38, 83, 178, 222, 400, 448, 532, 770, 856, 982
White Caps Mng., Nev.	38, 83, 178, 264, 400, 448, 488, 532, 576, 618, 704
—Morning Glory suit	1024
White Cloud, Colo.	176, 855
White, D. General geology	†936
White Eagle Rfg., Kan.	821
White Horse, Mont.	448
White, K. D.	896
White Knob Cop. & Devel.	1019
White lead and oxides, 1917	62
White, O.	1110
White Pine Exten. Mich.	355, 398, 1109
White Pine, Mich.	221, 355
—Production	177, 264, 487, 814, 1026, 1149
White Raven, Colo.	941, 1193
White Swan, Okla.	942
Whitehouse and Veasey. Water-blast appa- ratus	*922
Whiteside, O. E.	572
Whiton, H.	1171
Whittier, W. H. Iron ore of Northwest	†350
Whittemore, A. C. Hoisting ropes formula	1047
Wholesale Coal Trade Assoc. of N. Y.	607, 764
Whose war is it? Editorial	811
Wichita Oil & Rfg., Kan.	821
Wide West, Colo.	1193
Widnes, Eng.—Tungsten mfr.	502
Wiggins, A. E.	1060
—Photo	740
Wilcox, L.	572
Wild Horse, Colo.	399, 575, 617, 900
Willard, C. G.	896
Willard-Gibbs medal	1106
Willcox, F. H. Occupational hazards	†766
Willet, R. D. Air-compressor drive	685
Willet, Ark.	617
William, Foster, Whitehouse, Okla.	82
Williams, E. A.	940
Williams, G. A.	978
Williams, H. D.	962
Williams Harvey Corp.	83, 930
Williams, J. S.	561, 887
Williamson, W. L.	767
Willis, C. F. Community interest	*830, 883
Wills, E. C.	304
Wilsonshire Bishop Creek, Calif.	981
Wilson, A. W. G.	513
Wilson, Ark.	1025
Wilson, H. M. Mine labor accidents	427
Wilson, M. E. Magnesite deposits, Quebec	†766
Wilson, Okla.	177, 942
Wilson, Pres., Sun editorial on	242
—War and	973
Wilson, Sec., clear vision of. Editorial	347
Winchester, D. E.	107
Wind-direction recorder	995
Wind protection for sand dumps	914
Windeatt, T. R. A. Gravel pumps	*515
Winnipeg Geol. Club	896
Winona Corp., Mich.	37, 221, 307, 399, 447, 814, 896, 1026, 1064, 1150
Winslow, A. Tin, Va.	5
Wire rope export	167
—Mfrs. meet Requa	753
—Standardization	608
Wirtz, H. M. Long-handled shovel	*560
Wisconsin—Mine evaluation	322
—Zinc, 1917 review	69
Wisconsin Zinc Co.	70, 488
Wisconsin zinc district	83
Wisconsin Zinc Lead	178
Wistman, Minn.	447
Witherbee, Sherman & Co.—Magnetic con- centration practice	*912
Witwatersrand. See "Transvaal."	
Woakes, E. R. Molybdenum industry, Nor- way	490
Wolcott, H. M. Manganese, Cuba	779
Wolf, A. G.	614
Wolf, J. F.	304
Wolfson, H. M.	937
Wolfram—Queensland	1171
—Siam	1082
—Tasmania	1032
Wolframite. See also "Tungsten."	
—China, Kwangtung	24
Wolverine and Ariz., Ariz.	398, 702
Wolverine, Mich.	399, 532
—Dividends	843
—Production	307, 447, 703
Woman's Comm. for Engr. Soldiers	211
Womble, L. A.	937
Women in anthracite industry	840
Wood—Fuel Value	16
Woodbridge, D. W.	1106
Woodlawn Corp., Utah	662
Woodman Mng., Utah	448, 576, 618
Woods, T. S.	896
Woodward Iron, Ala.	80, 1064
Woodward, J. H., died	34
Woodward, W. N.	528
Wookey, S. A.	351
Woolfolk, W. G.	927
Wooton, P.	351
Work of petroleum geologist	822
Workers, Effect of high temperature on	998
Workmen's Compensation, Ariz.	1147
—Atolia Mng. decision	373
—Calif.	175
—Ida.	147
—Mont.	34
World's Fair mine, Ariz.	980
World's principal mines	87 (erratum)
Worrell, S. H.	994
Worth, Colo.	899
Wraith, W.	1146
Wright, C. A.	731, 768, 767, 979
Wright-Hargreaves, Ont.	38, 84, 356, 704, 900,
	1064
Wright, W. H.	810
Wyandot, Mich.	221, 307, 770
Wyandotte, Mo.	532
Wyoming Valley, Colo.	263
X	
X. Y. Z. Sidelights on Alaska	797
X. Wages problem	557
Y	
Y., G. J. Coal storage	*602
Yaeger Canyon Cop., Ariz.	354, 940
Yale & Towne Mfg. Co.	597
Yankee John, Calif.	354
Yates, B. C.	34
Yavapai district, Ariz.	*1113
Yeager Canyon, Ariz.	446
Yeaman, P.	396, 444, 810, 891, 1186
—Minerals Admin. testimony	970
—Mng. & Metal. Medal presentation	*595
Yellow Aster, Calif.	262, 702, 981
Yellow Jack, Okla.	982
Yellow Jacket Mines, Colo.	81, 447, 1149
Yellow Pine district, Ore deposits	455
Yellow Pine Mng., Nev.	318, 456
—Annual report	593
—Dividends, 1917	161
By months	32, 656
Yerkes, R. M. Mental tests	254
Yonge, A. M.	614
York Mng. Co., Minn.	82
Yorkshire Iron ore deposits	1117
Young America, Calif.	354
Young, C. M. Storage of coal	*601
Young, E. W.	927
Young, G. J.	174
—Heap leaching	339, 430
—Sink of the Amargosa	*985, *1000
Young, J. W.	856
—Frost in Alaska	338
Young, R. B. Rand gold deposits	106
Yuanml mine, W. Australia—Gold precipita- tion	506
Yuba Consol., Colo.	81
—No. 17 dredge	*374
—Redredging operations	*3
Yuba Dredge, Calif.	617
Yuba Manufacturing Co.	1107
Yukon Alaska Trust—Dividends, 1917	161
By months	32, 686
Yukon Gold Co., Alaska	109
—Annual report	1134
—Dividends, 1917	161
By months	32, 686
Yukon Gold Co., Ida.	64, 82, 219
Yukon Gold Mng., Calif.	897
Yukon Chief Gold & C. Ariz.	1063
Yundt, L. D. Chemicals in flotation	798
Z	
Zalinski, E. R. Mining in Utah	140
Zeigler flotation machine, Success, Ida.	*708, *711
Ziegler, V. Popular oil geology	*936
Ziegler, W. L. Differential lead & zinc flota- tion	*71
—Mine forge	*291
—Selective flotation	485
Zellweger furnace	558
Zeppelins—Aluminum alloy analysis	425
Zinc. See also "Spelter."	
—Algeria	1174
—Ark. field	*313
—1917 prod.	306
—Australia	939
—Concentrates	1013, 1024
—Zinc Basin, Ark.	1192
—Zinc Basin, Mo.	355
—Zinc, Calif., Shasta, 1916	445
—Camp, Ark.	306
—Zinc—Bounty	1108
—1917	590
—Zinc carbonate in lead-silver	256
—Zinc charge	558
—Grinding and briquetting	370, 883, 1175
—Zinc, China, Amer. market	234
—Determination	386
—Distillation furnace	*467
—Zinc Hill Mng., Mo.	446
—Flotation	*707, *741
—Industry situation	807
—Zinc—Japan	1059
—Joplin dist.	280
—1917 review	70
Zinc market, 1917. Vogelstein & Co.'s review	216
Zinc metallurgy, 1917 review	96, 558
Zinc, Mexico, tax	657
—Mo.	616
—Pneumatic mill, Morning, Ida.	*708
—Price	768, 939, 1012
—Refining	1083
—Rolling mill, Mo.	176, 262
—Smelting possibilities, Tonkin	316
Zinc sulphate in flotation	916
Zinc, U. S. Editorials	694, 807, 1018, 1191
Situation	1191
Smelting capacity	69
Imports and exports	17, 69, 303, 424,
	761, 1003, 1141
—Wales	1116
—Wis., 1	

