

Index to Volume 37

JANUARY TO DECEMBER, 1932

~~10557/~~
LIII
OK



COAL AGE

No 5^m



McGraw-Hill
Publishing Company, Inc.

330 West 42d Street

New York City

2246

COAL AGE

With Which Is Consolidated
The "Colliery Engineer" and "Mines and Minerals"



P. 375/32

INDEX TO VOLUME XXXVII

January to December, 1932

NOTE—The articles and references in this index have been classified under leading subjects or topics, as far as practicable, and should be sought under such heads, which, together with all unclassified matter, are arranged alphabetically. Illustrated articles, or cuts standing by themselves are indicated by an asterisk (*). The subject matter of editorials will be found classified under the subject with which they deal and marked (e). Many titles of articles are abbreviated, the aim being to give prominence to important words.

Following is a list of the pages included in each issue of the volume, together with date and number of the issue, for convenience of reference:

	Pages
January	1-42
February	43-90
March	91-130
April	131-180
May	181-220
June	221-256
July	257-286
August	287-310
September	311-348
October (Model mining)	349-392
November	393-422
December	423-454

A

Accidents	
Explosion kills thirty-eight	124
Explosive water pipes (e)	258
Gas ignition kills three men	38
Monthly fatality reports	39, 90, 127, 175, 217, 254, 284, 314, 340, 392, 420, 462
1931—record year in safety. Scott Turner Rate lowest on record	63 21
Report forms for classifying mine acci- dents	*206
Virginia explosion kills six	84
Virginia explosion kills ten	284
Wanted: more 1931! (e)	22
Woodward mine cave, explosion, and re- covery. P. H. Dever	*187
Accounting. See Management.	
Aerial Tramways. See Refuse Disposal.	
Alabama	
Mining and industrial enterprises may build power lines	390
Alaska	
Anthracite reserves revealed	36
American Institute of Electrical Engineers Lehigh section meet	36
American Institute of Mining and Metal- lurgical Engineers	
Anthracite section meets	172
Coal division discuss anthracite prob- lems	398
Coal types and property values, report of meeting	97
American Mining Congress	
Cincinnati convention report	229
National Exposition of Mining Equip- ment	*243
Organizes coal division	122
Program committee	88
American Society for Testing Materials	
Feasibility of coal to be studied	169
American Society of Mechanical Engineers and Engineers' Society of Northeastern Pennsylvania	
Meeting discusses haulage	403
Anthracite	
Coal division of A.I.M.E. discuss prob- lems	398
Concentrates on methods of cost reduc- tion	*53
Cutting costs through modernization	135
Operating-cost dollar, 1931	135
Paging tomorrow (e)	221
Production, monthly	33, 83, 167, 253, 282, 314, 346, 392, 420, 452

Size standards adopted	122
Anthracite Forest Protective Assn. Officers elected	87
Anthracite Institute	
Supports research	314
Anti-Trust laws	
Hoover urges inquiry into workings	34
Anti-trust laws. See also Economics.	

B

Backfilling	
Anthracite practice	54
Backfill at Hallstead behind permeable bar- riers. S. D. Dimmick	227
Mine roof support—A.I.M.E.	100
Blasting	
Eccles mines—blasting methods. Brosky & Given	*291
Misfire and premature blasting safe- guarded	*308
Safe shotfiring	*416
Shotfirers' dispute in court	36
Using electric detonators to prevent mis- fires	*447
Book reviews	25, 113, 203, 277, 307, 388, 413, 445
Boreholes	
Grouting pneumatically	80
Briquetting	
Briquets of one coal uniform in quality. L. Epperly	*15
British Columbia	
Fuel reserve released	213
Broad Top Coal Operators' Assn. Central cleaner proposed	121
Brotherhood of Locomotive Engineers Sell coal properties	319
Bureau of Mines	
Appropriation cuts threaten service	121
Appropriations—axes and pruning knives (e)	111
Explosives approved	86, 170
Permissible plates issued	36, 88, 124, 211, 254, 283, 313, 345, 419
Still in danger (e)	161

C

Canada	
Empire agreement threatens anthracite exports	312
Subvention asked for coal	84
Grants coal subsidies	253
Car-check board, swinging	*165
Chauncey B. Ross Mining Institute Annual election	124
Coal	
Coal-oil fuel successful	284
Estimate of shipments, quarterly	33, 167
Moisture studies in coal grouping. A.I.M.E.	*98
Physical characteristics—A.I.M.E.	*97
Relation of timber to coal detailed by Meguire	451
Coal, bituminous	
Production, monthly	33, 83, 167, 253, 282, 314, 346, 392, 420, 452
Propose bituminous laboratory	450
Coal Age—historical summary	33
Twelfth Annual Model Mining Number, October	
Coal Mining Institute of America	
Meeting discusses safety devices	13
Coal stock reports (e)	393
Coal use. See Utilization.	
Colorado & New Mexico Coal Operators' Assn.	284
Elects officers	284

Combustion	
Radiance and coal (e)	424
Committee of Ten—Coal and Heating Industries	
Officers elected	284
Pittsburgh forms local co-operative group	88
Local associations formed at Birming- ham, Charleston, and Knoxville	36
To issue educational bulletins	88
United industry (e)	110
Compressed air and compressors	
Anthracite practice	54
Susquehanna Collieries practice	*373

Conveyors

Anthracite shaking chutes	*53
Comparative power costs for hoists and conveyors. F. A. Kolb	241
Cutting costs with conveyors	139
Room conveyors add to profit in mining Indiana thin seam	*19

Costs

Comparative power costs for hoists and conveyors. F. A. Kolb	241
Cost reduction programs at Cincinnati convention	229
Cutting costs with loading machines	139
Cutting transportation costs with modern equipment	145
Operating-cost dollar, anthracite mines, 1931	135
Operating-cost dollar, bituminous mines, 1931	132
Power savings—where to find them	147
Reducing maintenance costs	151
Ventilation costs can be reduced with profit	153
Cumberland Mining Institute Organized	344
Cutting Machines	
Advantages of tipping bits with abrasion- resisting alloy. A. F. Brosky	*259
Changes in bit clutch roller	*209
Cost-cutting with track mounted cutting machines	138
Shearing straightens rib	*208

D

Depletion. See Taxes.	
Dispatching saves \$46.44 daily at mech- anized mine in Ohio. A. J. Ruffini	263
Drainage	
Anthracite practice	55
Handling water from two shafts in bal- anced system	*117
Tunnel cuts costs at Honey Brook. C. F. Huber	*2
Water can be free of acid (e)	23
Drainage. See also Pumps and Pumping.	

E

Eastern Ohio Coal Operators' Association Annual election	124
Economics	
Anti-trust laws act as barrier to stabili- zation (e)	43
Anti-trust laws—pressure grows (e)	110
Break the deadlock! (e)	222
Coal commission bill in Congress	83
Common ground (e)	160
Competitive onslaughts, coal industry de- fends itself against in 1931	65
Cost reduction programs at Cincinnati conventions	229
I.C.C. hits reciprocity	451

Lewis Coal Commission bill introduced... 123
 Modernization moves (c)..... 303
 Money for comfort (c)..... 318
 President's Organization on Unemployment Relief meeting on coal miner... 210
 Rocky Mountain States problems..... 265
 Start capital goods (c)..... 258
 Valuation of coal properties, A.I.M.E. 99
 Where responsibility lies (c)..... 317
 Why modernize now? (c)..... 349
 Economics. See also Stabilization.
 Education
 Learning to think (c)..... 23
 What graduates should know, A.I.M.E. 100

Electricity
 Bond, bracer, of scrap steel..... *79
 Bond welding, sequence influences character of weld..... *447
 Cable insulation..... 309
 Cable supported between pole spans... *106
 Cleaning generator armature..... 101
 Contactor mounting saves space and reduces hazards..... *386
 Contacts, stainless steel reduces faulty operation..... 448
 Controller finger base blocks stop arcing and burning..... *417
 Converter controls with sequence numbers..... *79
 Demand limiter, counter aids in adjustment..... *448
 Determination of economical conductor size..... *32
 Dual systems protect pump station, W. Kelsor..... *325
 Eccles mines electrification, Brosky & Given..... 292
 Effect of load on horsepower in fast mine hoist duty cycles, Chadbourne & Lee..... *269
 How synchronous motor was fitted to mine fan..... *278
 Inland Steel modernizes electrification to reduce costs..... *427
 Insulating tops applied to cable reel locomotives..... *82
 Loading machines at Valier depend on alternating current (ser. pt. 1)..... *299
 Motors for mine fan drives, H. W. Chadbourne..... 404
 Non-reverse manual controller made semi-automatic..... *281
 Oak Hill electrification cuts costs, W. A. Thomas..... *442
 Open field switch may not cause load loss..... 447
 Portable installation reel prevents cable injury..... *341
 Power savings—where to find them... 147
 Power transmission in coal preparation plants..... 273
 Rail bond economics found by formulas... 280
 Slate gate system at Eccles shaft..... *308
 Susquehanna Collieries electrification... *308
 Synchronous drives for mine fans, R. S. Sage..... 182
 Temporary bond for secondary tracks... 446
 Thermal control relays cut locomotive maintenance..... *207
 Track switch contactor..... *120
 Transportation and hoisting at Valier (ser. pt. 2)..... *327
 West Virginia Coal & Coke mines electrify, I. A. Given..... *319
 Engineers' Society of Northeastern Pennsylvania and American Society of Mechanical Engineers
 Meeting discusses haulage..... 403

F

Financial reports..... 120, 214
 First aid and mine rescue
 Kanawha Valley Mining Institute and Coal River Mining Institute meets... 390
 Kentucky holds meet..... 346

Freight Rates
 Illinois coal rate decision..... 167
 Lake cargo rates refused by I.C.C..... 83
 Ohio rates reduced..... 390
 Reduced to meet gas competition... 344
 Reductions to combat trucking in Illinois and Colorado..... 418
 Rise effective..... 33

G

Gas in Mines
 Freeing mines from gas (c)..... 200
 Hydrogen appears also (c)..... 288
 Woodward mine cave, explosion, and recovery, P. H. Dever..... *187
 Grafton Mining Institute—formed... 85
 Graphite records point out hidden facts... *206

H

Harlan Mining Institute
 Elects officers..... 38
 Hazard Coal Operators' Exchange
 Annual election..... 88

Hoists and Hoisting

Comparative power costs for hoists and conveyors, F. A. Kolb..... 241
 Effect of load on horsepower in fast mine-hoist duty cycles, Chadbourne & Lee..... *269
 Electrification and hoisting at Valier (ser. pt. 2)..... *327
 Susquehanna Collieries haulage and hoisting..... *303

I

Illinois
 Illinois—and the machine (c)..... 287
 Shotfitters' dispute in court..... 30
 Illinois Mining Institute
 Report of annual meeting..... 440
 Summer meeting..... 283

Illumination

Anthracite preparation plants..... 56
 Cleaning plants present special lighting problems, J. H. Edwards (ser. pt. 2), J. H. Edwards (ser. pt. 1)..... *303
 Indiana Coal Mining Institute
 Annual meeting..... 124
 Organized..... 36
 Industrial Relations
 Employees' aid plan put in force by Alabama Fuel & Iron Co..... 282
 Gardens for employees..... 173
 Insurance for 1.5 cents per day, J. M. Dombhart..... 302
 Iowa Fuel Conference..... 284

K

Kanawha Coal Operators' Assn.
 Elects officers..... 420

L

Labor

Anthracite operators ask wage cut..... 345
 Anthracite operators and miners argue wage reductions..... 125
 Anthracite strike ends..... 171
 Anthracite wage board chosen..... 419
 Anthracite wage conference ends in disagreement; board to be appointed... 391
 Anti-injunction bill signed..... 168
 Arkansas-Oklahoma wage agreements signed..... 391
 Bonus base rates for types of equipment established by Union Pacific Coal Co... 266
 C. A. Hughes Coal Co. mine resumes operations..... 125
 C. A. Hughes Coal Co. miners strike... 87
 Central Pennsylvania wage reductions posted..... 171
 Colorado Industrial Commission disapproves northern Colorado reductions. Contract dispute closes northern Wyoming mines..... 256
 Eliminate referendum (c)..... 317
 Excelsior Springs (Mo.) mines closed by strike..... 214
 Hocking Valley operators push lower wage scale..... 87
 Hocking Valley miners strike..... 125
 Illinois and Indiana deadlock continues. Illinois and Indiana mines suspend operations..... 171
 Illinois-Indiana-Ohio deadlock continues. Illinois miners to vote again on wage scale..... 313
 Illinois and the machine (c)..... 287
 Indiana wage agreement signed..... 391
 Insurgents set Belleville prices..... 450
 Kentucky strike accompanied by violence... 87, 125
 Kentucky strike call meets little response... 35
 McAlester (Okla.) miners strike..... 314
 Martial law declared in Indiana..... 313
 Missouri miners strike..... 35
 Montana miners accept wage cut..... 346
 National guard companies in Tennessee... 450

National Guard moves in Johnson County, Ark..... 314
 New River and Windimr Gulf wages reduced..... 125
 New union formed in Illinois..... 345
 Norfolk anti-injunction bill in Congress... 38
 Northern Colorado companies file wage reduction notice..... 214
 Northern Wyoming miners accept wage cut..... 346
 Nova Scotia Commission recommends wage reduction..... 125
 Nova Scotia miners accept wage award... 256
 Nova Scotia miners refuse wage award... 171
 Nova Scotia miners and operators argue wage cuts..... 35
 Ohio strike cuts production..... 214
 Ohio strike ended by settlement..... 301
 Oklahoma miners strike..... 35
 Pittsburgh Terminal Coal Corporation signs new wage scale..... 283
 Pocahontas operators cut wages..... 87
 Ray and Clay County (Mo.) operators agree with union..... 256
 Rocky Mountain Fuel Co. signs new agreement..... 283
 Shorter working time, W. M. Chambers... 75
 Southern Wyoming agreement signed... 283
 Strike bound mines reopen in Ohio... 283
 Strike called in Ohio and West Virginia Panhandle..... 171
 Strike called in Washington County, Pa. Strike in Crow's Nest Pass field... 171
 Tuscarawas (Ohio) contract signed... 313
 Union leaders agree to wage reduction in Wyoming..... 256
 Unionization by flat (c)..... 91
 United Mine Workers carries on organization plan in Southwest..... 283
 Wage reduction requested in southern Wyoming..... 214
 Wages cut in northern West Virginia... 283
 West Virginia agreements renewed... 256
 Labor. See also United Mine Workers.
 Lambie, R. M., Coal Mining Institute
 Elects officers..... 420

Law and Legislation

Appalachian Coals injunction suit... 312, 344, 391
 Coal Commission bill offered in Congress... 83
 Coal takes leadership in reform of anti-trust laws (c)..... 423
 Davis-Kelly bill (c)..... 258, 221
 Davis-Kelly bill amended; other measures proposed..... 282
 Davis-Kelly bill hearings..... 168, 211, 255
 Drive on anti-trust laws..... 450
 Hoover urges inquiry into anti-trust laws... 34
 Lewis coal commission bill introduced... 123
 Norris anti-injunction bill in Congress... 38
 Norris bill passed by Senate..... 124
 Norris anti-injunction bill passed by committee..... 84
 Oil control law upheld..... 253
 Where will it end?..... 200

Lubrication

Changes in bit clutch oiler..... *209
 How to clean and lubricate hoisting ropes..... *309
 Maintenance factors in mechanical loading, K. E. Caine..... 301

M

Maintenance

Asphalt emulsion bonds patched concrete... 281
 Braces help keep eccentric arms trued up..... *448
 Broken fan shaft fixed within 24 hours... *207
 Cleaning generator armature..... 164
 Compressor, portable, mounted on trailer... *440
 Crack in hoist drum reinforced with boiler plate..... *279
 Fan shafts and hubs repaired with bab-bit metal..... *417
 Herringbone gear, pipe applied to stop noise..... *448
 How to clean and lubricate hoisting ropes..... *309
 Inland Steel Co. revises electrical repair and inspection system..... *427
 Locomotive armatures, labyrinth seals add life to bearings..... *117
 Mechanical loading, K. E. Caine..... 261
 Pinion puller developed for loading machine motors..... *449
 Pipe straightener..... *30
 Portable installation reel prevents cable injury..... *341
 Problems in maintenance—Cincinnati convention..... 234
 Rail anvil simplifies removal of cutter chain rivets..... *105
 Reducing maintenance costs..... 151
 Repair of coal mining machinery, G. H. Emerson..... 109
 Rubber belts should be stored in cool place..... 342
 Scale in feed pipe drilled by coal auger... *81
 Slotted pine for hanging trolley wire on high roof..... *341
 Susquehanna Collieries program..... *378
 Truck for moving loader head in limited clearance..... *118

West Virginia Coal & Coke builds new repair shop and modernizes methods. *319

Management

Board display helps campaign of war on waste *119
 Cost accounting for mechanized operations, pt. 4. K. E. Calne *7
 Graphic records point out hidden facts. *208
 Rocky Mountain States problems. *263
 State costs can be controlled. D. A. Loscalzo *304
 Susquehanna Collieries operating organization *354
 What constitutes fair depletion? A. W. Hesse 191
 Maryland Coal Aid Assn. Officers elected 86

Mechanization

Anthracite concentrates on methods of cost reduction *53
 Cost accounting for mechanized operations, pt. 4. K. E. Calne *7
 Cost cutting with loading machines. 139
 Entry driving costs cut with mechanized loading. P. R. Paulick *95
 Illinois and the machine (e) 287
 Loading machines at Valer depend on alternating current (ser. pt. 1) *299
 Loading machine in thin vein longwall development. J. H. Edwards *185
 Machine-loaded tonnage up in 1931. 212
 Machines point the way to profits—Cincinnati convention 231
 Maintenance factors in mechanical loading. K. E. Calne 261
 Master or slave? (e) 350
 Nova Scotia Mining Society discusses modernization 271
 Review of 1931 developments 61
 Susquehanna Collieries mechanized mining *361

Merchandising

Automatic heat (e) 394
 Automatic heat service offered 390
 "Blue coal" on air again 390
 Coal Service, Inc., offers advertising and merchandising service 344
 Hot from Hollywood (e) 287
 Make them heat conscious (e) 110
 Modern coal preparation from the consumers' standpoint
 As the retailer views it. R. A. Miller. 44
 What the industrial buyer thinks. G. B. Gould *45
 What it means to railroads. Malcolm MacFarlane *48
 No air, no health (e) 111
 Prices and progress (e) 166
 Susquehanna coals *381
 Trucking of coal discussed by Pennsylvania retailers 36
 Trucks display grades of coal *169
 Merchandising. See also Committee of Ten.
 Methane—that strange light (e) 161
 Midland Electric Coal Corp. Modernizing preparation. K. R. Bixby *223
 Midwest Bituminous Coal Conference Report of meeting 215
 Mine cars. See Transportation.
 Mine doors. See Ventilation.
 Mine Inspectors' Institute of America Officers for new year 312
 Record of meeting 239
 Mine timbers
 Still standing but useless (e) 257
 Mine timbers. See also Subsidence.

Mining Methods

Anthracite reserved in battery protected by seal 81
 Backfill at Hallstead behind permeable barriers. S. D. Dimmick 227
 Consistent daily output built through loader system. A. R. Long *401
 Evading rock costs (e) 221
 Face preparation profit possibilities at Inland Steel Co. revises system at Wheelwright mines. E. R. Price *425
 Panel thin seams also (e) 222
 Room conveyors add to profit in mining Indiana thin seam *19
 Subsidence discussed by A.I.M.E. 398
 Susquehanna Collieries practice in pitching beds *350
 Thin-vein longwall development uses loading machine. J. H. Edwards *185
 West Virginia Coal & Coke mines modernize. I. A. Given *319
 Woodward mine cave, explosion, and recovery. P. H. Dever *187

Modernization

Inland Steel program *425
 Wheelwright program (e) 423
 Monongahela Valley Coal Mining Institute Elects officers 38
 Muscota Shoals—new private operation 122
 Museum of Science and Industry visited by A.I.M.E. men 213

N

National Coal Assn.

Assumes leadership in anti-trust law reform (e) 423
 Bituminous laboratory holds promise (e) 424
 "Clean" coal code 170

Drive on anti-trust laws 450
 Government relations problems discussed 84
 Survey of bituminous coal trucking 418
 To collect data on relation of coal and railroads 418
 Will defray expenses of Appalachian Coals suit 167
 National Safety Council Annual congress studies accident prevention *109

Natural Gas

Advertising campaign to start this year 213
 Pipe line construction 35
 Pipe line map construction in 1931 *68
 Review of growth in 1931 69
 Sales 35

New Equipment

Air equipment for cleaning coal *421
 Belt dressing 178
 Bit, removable, for air drills *129
 Blasting cap *246
 Blocks, mine car safety *41
 Blueprint dryer *220
 Boiler, multiple circulation *179
 Brakes, shoo type Thrustor-operated *177
 Car pulley, drum and capstan *170
 Car retarder and puller *285
 Car spotter *176
 Clutch, one-way *219
 Coal breaker, hydraulic, of rubber *315
 Coal cleaner 246
 Coal washing table 246
 Combustible gas indicator *246
 Compressor, mine-car *40
 Conveyor, steel apron *285
 Conveyor and elevator *421
 Conveyor carrier, anti-friction *128
 Core-drilling aids 347
 Crane unit 243
 Cutting machines *422
 De-dusting equipment 453
 Dragline bucket *178
 Drill, electric coal *129
 Drill, permissible coal 40
 Drills, rock 244
 Drills and drilling supplies *179
 Drive, variable speed *421
 Dryer, continuous heat *453
 Electricity:

Across-the-line control, air-break, explosion-proof *42
 Air heaters *245
 Battery cell, Exide-Ironclad 177
 Battery charger *218
 Circuit breaker, flashless *170
 Drip cover for motor *244
 Hoist, portable *177
 Interconnection of distribution transformers *245
 Magnetic controller *463
 Master stations, weatherproof *180
 Meter, demand *179
 Motor, fan-cooled induction *315
 Motors, gear *179
 Motors, splashproof induction *180
 Motor generator set *129
 Motor inclosure of corrugated copper 218
 Motor and reducer combined *178
 New brush material *348
 Plugs for individual fusing 177
 Pushbutton, safety 177
 Pushbutton stations *128
 Starter, explosion-proof 316
 Starter, time 315
 Starters for squirrel-cage induction motors *454
 Starter, mill-type *290
 Starter has no fuses *347
 Starter frame, arc welded 42
 Starters and controllers *245
 Strip chart recording instruments 42
 Switch, drum reverse *245
 Switch, magnetic transfer 42
 Switch, mercury flush tumble 42
 Switch, plunger type weatherproof 220
 Switch, time 315
 Switch book, safety *315
 Switchgear, outdoor 316
 System for remote control *40
 Telephone, outdoor 42
 Time meter *130
 Transmission, electro hydraulic *218
 Volt-Ohmmeter, direct current 421
 Excavator, dragline *40
 Explosive, coal 286
 Explosive container, rubber 422
 Explosives—free running powders *178
 Explosive, rock 177
 Gas mask 454
 Gasket materials *130
 Gasket material, oil-resisting *347
 Gate, apron, for bins *177
 Greaser, mechanical 244
 Grinder, shank 41
 Headlight for locomotive *285
 Hoist, electric portable *440
 Hoist, triple geared, car pulling *453
 Hoist for stripping shovels *41
 Hoists, double-drum, air *128
 Joint for cast-iron pipe *178
 Lamp, electric trap 244
 Lamns, permissible hand 453
 Latch-tripping mechanism *243
 Linestarter, explosion-resisting *219
 Loader *180
 Loader, portable 247
 Locomotive, gasoline *454
 Lubricants *286
 Motor and reducer combined *247
 Oil seal for bearings 130
 Pine, chemical carbon acid-resisting *120
 Pine cutter, square end 346
 Primer, suction line *213

Pump, inclosed self-oiling piston type. *247
 Pump, sand *218
 Pumping unit, centrifugal, automatically-primed *453
 Rail bender *170
 Rail bonds *285
 Rerailer and derailer *246
 Safety equipment *243
 Saw, coal *128
 Saw, portable timber *176
 Screen, heavy duty vibrating *240, 316
 Screen, vibrating *422
 Shaker, testing sieve *285
 Shes and pacs, safety *421
 Snub sheave *220
 Speed reducer, motorized *42
 Speed reducer, small *210
 Speed reducer, vertical *286
 Speed reducer, worm gear *42
 Strain clamp 316
 Switch, time 40
 Tape, rubber and friction 177
 V-pulleys 246
 Valve, "Thrustor" operated *247
 Ventilator, gasoline-powered 246
 Washers *130
 Weight indication is automatic *348
 Welder *347
 Welding auxiliaries 178
 Welding control 219
 Welding equipment 128
 Welding gas regulators *348
 Welding "power saver" *316
 Welding and cutting torch *180
 Wick oil-feed unit 247
 Wire rope 41
 Worm gear reduction unit 38
 New River Coal Operators' Association Annual election 38

Notes From Across the Sea

Arches for roof support in Germany *248
 Backfilling with cement gun in Germany *444
 Backfilling in Germany 444
 Blasting aid used in India 388
 Broadcutting in Germany *248
 Corrosion of mine pipe lines *276
 Drive for shaking conveyors in Germany *202
 Lamp operated by magnetic induction in Great Britain 24
 Locomotive filled with live steam in German mines 306
 Low temperature distillation system to avoid friable and low density product *112
 Mining seams located one above the other 306
 Methane in mines *444
 Peat for roof support *306
 Pneumatic gob stower in Europe 202
 Scraper loading 112
 Sedimentation *388
 Short conveyor with ramped trough and adjusting ratchets 412
 "Simultaneous shooting" in Europe 271
 Nova Scotia Mining Society Report of meeting

Obituary

Aldrick, T. H. *213
 Amos, Ward M. 125
 Bell, Ench 258
 Bertie, C. E. 250
 Berwind, Harry A. 420
 Brewster, T. T. *38
 Brophy, John S. 38
 Bullitt, Joshua P. 216
 Bush, M. W. *89
 Byrne, James 174
 Casey, James 216
 Childers, E. B. 348
 Collins, Jarius 258
 Coulter, H. W. 420
 Crockett, Thomas S. *38
 Dawson, Thomas 346
 Delaney, William P. 284
 Esser, John A. 174
 Fregans, W. H. 89
 Fries, J. E. *172
 Gay, H. S. 346
 Henderson, William E. 216
 Hess, F. E. 314
 Humphries, William Y. 256
 Jenkins, C. H. 452
 Jones, James E. 420
 Jones, John D. 346
 Jones, R. J. 216
 Kavanaugh, William Kerr 118
 Leiter, Joseph 174
 Lenhart, Charles E. 284
 Maher, Thomas 89
 Maloney, Robert P. 256
 Mann, Isaac T. 314
 Manning, Van H. 89
 Marland, John 314
 Maurer, Charles E. 89
 Mosbey, Nathaniel 126
 Murphy, Joseph L. 174
 Nicholson, George *420
 Paisley, James A. 174
 Patterson, Samuel W. 216
 Postlewaite, David N. *84
 Sherman, Dr. George H. 346
 Seward, Adrian *451
 Slaughter, William P. 346
 Taylor, Harry N. *213

Thomas, Peter B. 302
 Van Meter, Harry 314
 Watson, James C. 89
 Widdowfield, Arthur 420
 Wilbur, Warren A. 89
 Worthington, Robert G. 218
 Zook, Joseph D. *255

Ohio
 Coal aid group formed 30
 Safety drive started 36

P

Panhandle Coal Mining Institute
 Annual election 124

Patents
 Loading machine case settled 36

Pennsylvania Retail Coal Merchants Assn.
 Trucking discussed 36

Personnel Changes

Alexander, O. L. 254
 Anderson, George J. 254
 Bowen, Harry 216
 Braggins, Fred W. 340
 Braggins, F. W. 124
 Clay, R. V. 392
 Conners, Stephen J. 420
 Cosgrove, John C. 346
 Craft, George W. 80
 Crockett, James F. 452
 Dickenson, S. J. 37, 452
 Dorrance, Charles 37
 Estill, R. R. 80
 Field, A. C. 284
 Gandy, Harry L. 174
 Gandy, Harry L. 174
 George, Edgar E. 80
 German, W. J. 37
 Gilbert, Roy C. 124
 Graf, Fred A. 254
 Hammond, Horace 452
 Hawthorne, H. R. 314
 Hacker, V. N. 216
 Heiner, Moroni 284, 452
 Hull, D. D. Jr. 80
 Jenkins, W. J. 254
 Johnson, Charles G. 80
 Johnson, Edward 254
 Johnson, S. B. 80
 Johnson, S. B. 254
 Johnson, T. E. 254
 Jones, James E. 37
 Keiser, William 80
 Kennedy, Harry G. 420
 Kernohan, W. R. 37
 King, C. C. 302
 Lesser, W. H. 216
 MacFarlane, Malcolm 452
 Martin, Fred S. 254
 Massey, Ivor 284
 Meehan, James A. 37
 Mendenhall, Walter C. 346
 Miller, Rice 346
 Montgomery, W. B. 216
 Morrow, J. D. A. 284
 Nould, John R. 284
 O'Hara, George V. 346
 O'Neill, Charles 420
 Ord, W. D. 254
 Phelps, R. L. *122, 451
 Pierce, James H. 37
 Read, L. P. 37
 Richards, W. A. 37
 Richardson, C. F. 37
 Robert Sheppard 37
 Sanner, L. F. 254
 Saunders, A. C., Jr. 80
 Schultz, George A. 254
 Selth, R. L. 254
 Sheperd, Robert 37
 Smiles, Norman 420
 Smiles, Robert 124
 Smith, R. Templeton 254
 Snodgrass, B. W. 302
 Sproles, A. V. 254
 Steinbugler, John L. 174
 Steinhouser, George J. 451
 Taylor, Harry N. 124
 Thomas, John I. 174
 Thomas, M. W. 174
 Toulmin, P. 452
 Turner, Prof. H. G. 37
 Weber, L. R. 254
 Williamson, David 452
 Woods, L. E. 452
 Young, R. S. 452

POWER

Power Generation
 Lower power costs (e) 287
 Mechanization of firing turns boiler room waste into profit, John B. Harvey *107
 Susquehanna Collieries power generation *371
 Virginia power rates attacked 450

Preparation

Air cleaning plant, new tippie, West Virginia Coal & Coke Corp. *319
 Anthracite review 55
 Asphalting equipment for de-dusting *271
 Automatic weighing device for coal *342
 Bituminous coal revises preparation, I. A. Given (tables) 334
 Carrawell mine improvements *92
 Central cleaner proposed for Broad Top field 121

Chains adapt apron feeder to automatic control *309
 "Clean" coal code 170
 Cleaning plants present special lighting problems, J. H. Edwards (ser. pt. 2) *329
 Crane Creek reflects experience in pioneer air plant J. H. Edwards *237
 Deluding discussed by A.I.M.E. 308
 Dry cleaner in Virginia works without air *105
 Eccles mine installs air-cleaning plant, I. A. Given *294
 Fine dirt in coal (e) 393
 Getting business by modern preparation, illumination essential in preparation plants, J. H. Edwards (ser. pt. 1) *303
 Inland Steel Co. builds modern plant, cuts operating force *430
 "Kleen-Blox" plants for production of briquets 170
 Make middlings pay (e) 318
 Mechanical cleaning promotes consumer acceptance of Powhatan coal, Joseph Pursglove, Jr. *193
 Modern preparation for profits—Cincinnati convention 235
 Modernizing preparation, K. R. Bixby *223
 Monteviallo installs British washer *5
 New plant construction 33, 121, 210, 253, 312, 344, 450
 Paging tomorrow (e) 231
 Picking belts screen out snalls in British plants *209
 Power transmission in coal preparation plants 273
 Prep possibilities in face preparation, Railroads' viewpoint, McFarlane *48
 Retailers viewpoint, R. A. Miller *44
 Re-treatment of coal middlings, H. F. Yancey (series pt. 7) *11
 Rocky Mountain States problems 265
 Scrapping car *310
 Scrapers remove ash material from car angles *416
 Slack storage by conveyor and scraper *414
 Storing of coal by portable conveyors increases slack time running *104
 Susquehanna Collieries practice *366
 Technical trends in bituminous coal preparation during 1931 50
 Tomorrow's needs evaluated in Tennessee development *101
 Topworks construction in 1931 72
 Truck tires ease lumps onto picking table *251
 Utilities viewpoint, Gould *45
 Preparation. See also Refuse Disposal.

Pumps and Pumping

Automatic pump control at slope slump *385
 Centrifugal pump emptied by lift shaft in foot valve *105
 Deep-well pump at Indiana mine for de-watering *415
 Dirt removed from shaft sump with saw-tooth impeller *414
 Dual systems protect pump station, W. Keiser *325
 Eccles mines pumping problems, Brosky & Given 290
 Filling of wash house tanks controlled by signal *252
 Roof serves as stuffing box in column line repairs *449
 Susquehanna Collieries water problems *374
 Trap on suction end of pump keeps out trash *81
 West Virginia Coal & Coke modernizes stations *319

R

Railroads

Fuel purchases probed 187
 Fuel records 168
 Reciprocity in railroad buying attacked by I.C.C. examiners 86
 Reconstruction Finance Corp. — loans to mining companies 122

Refuse Disposal

Anthracite system 55
 Handled by subway conveyor and skips, J. H. Edwards *407
 Inland Steel Co. aerial tramway solves problem with smaller force *432
 Refuse disposal at an anthracite mine, D. A. Loscalzo 304
 Tractor trailer for rock disposal at Pruden *10
 West Virginia Coal & Coke modernizes methods to cut cost *319

Research

Bituminous laboratory holds promise (e) 424
 Fellowships offered 174
 Review of 1931 projects 57
 Snow removal by steam pipes (e) 111
 Rocky Mountain Coal Mining Institute
 Report of meeting 265

Roof control
 When pillars are removed (c) 161
 Russia
 Coal development plans 88



Safety

Accident reduction cheers mine inspectors 239
 American Rolling Mill Co., U. S. Fuel Co. and West Kentucky Coal Co. records 86
 Animated accident board *119
 Anthracite accident rates (e) 257
 Award presented to Pennsylvania coal companies *254
 Award won by A. B. Davidson 215
 Awards won by Block Coal & Coke Co., Stonega Coke & Coal Co., Bird Coal Co., Phelps Dodge Corp., Maryland 284
 Awards presented to Rocky Mountain States mines 268
 Balance sheet and safety — Cincinnati convention 233
 Card records for "Keep Safe" campaign *29
 Catch for slate car *81
 Direct returns in compensation (e) *424
 Door keeper promotes *343
 Eccles mines modernization, Brosky & Given *289
 Electric automatic mine door to meet mine-law requirements *249
 Electro-Meturgical Co. receives certificate of merit 312
 Fender for locomotives *120
 Hand rod safeguards throwing of room switch *30
 Head, eye, and foot safeguarded *107
 Health for the coal miner—American Mining Institute 99
 Holmes Association makes awards 170
 Injured moved safely in cars with stretcher suspension *252
 Inland Steel makes safety a major objective *437
 Kentucky companies' records 170
 Make it somebody's job (e) 200
 Measures for safety also pay dividends, 142
 Mine car holder *417
 Mining Institute discuss safety devices, 14
 Misfire and premature blasting safeguarded *308
 National Safety Council studies accident prevention *409
 1931—record year in safety, Scott Turner Ohio awards made at Congress meeting 213
 Ohio starts safety drive 30
 Pushbutton cuts hazards in scraper signal system *387
 Remote control switch device makes for safer haulage *208
 Rocky Mountain States problems 265
 Safe shuffling *418
 Shifting door of fireboss boards lights signals *82
 Signal Knob Coal Co. without fatality since 1907 312
 Signal system warns where men cross tracks *385
 Some soft coal safety factors (e) 288
 Stonega Coke & Coal Co. record 170
 Stonega wins awards 390
 Stop for preventing runaway *387
 Susquehanna Collieries program *375
 Union Pacific Coal Co. record 170
 Waiting for the check (e) 160
 Safety Institute, Williamson Field
 President elected 392
 Sales Agencies. See Stabilization.
 Sales agency plan, progress in various districts 123
 Scrapers
 Cutting costs with scrapers 159
 Shafts
 Anchor pockets for shaft guides welded from pipe *119
 Slate costs can be controlled, D. A. Loscalzo 304
 Smoke abatement
 St. Louis coal men fight smoke 174
 Southern coking coals and depletion discussed by A.I.M.E. 399
 Southern Wyoming Coal Operators' Assn. Officers elected 314
 Southwestern Interstate Coal Operators' Assn. Elects officers 284
 Officers elected 314

Stabilization
 Anti-trust laws act as barrier (e) 43
 Appalachian Coals sales agency ratified by executives 34
 Coal control plan urged 253
 Coal industry — 1931 proposals for stabilizing 65
 Developments in campaign for district selling agencies (e) 22
 District sales plan, J. V. Sullivan 75
 Sales agencies not enough (e) 1
 Steam engine guarded by remote control *252
 Stove for cooking and heating 418
 Strikes. See Labor.
 Stripping
 Anthracite practice 54

Supplies
 Expenditures for material and supplies in 1931 74
 Materials handling derrick 311
 Movable truck for timbers 381

T

Tank car for dry materials 216

Tariff
 Canada raises anthracite tariff 418
 Coal tariffs proposed 170
 Oil and coal taxes passed 253
 Tariff on fuel oil planned 83

Taxes
 Debating depletion; Kircaldie, Hesse 339
 Oil and coal imports in tax bill 172
 Oil and coal taxes passed 253
 What constitutes fair depletion? A. W. Hesse 191

Telephone
 Accessible when office is closed 343

Transportation

Air conveying sand system built at Nellis 280
 Automatic rope uncoupler on incline plane 415
 Bracer bond of scrap steel 479
 Brake, free-wheeling automatic 416
 Calks for ties keep track in place 244
 Car cacer 244
 Carswell mine improvements 92
 Check rails stop derailments on mine curves 251
 Dispatching saves \$46.44 daily. A. J. Kuffni 263
 Door keeper promotes safety 343
 Eccles mines transportation modernization. Brosky & Given 292
 Electrification and transportation at Valer (ser. pt. 2) 327
 Haulage discussed at Wilkes-Barre meeting 403
 Hinged trolley harp 166
 Hoisting rope for circuit in operating man car 385
 Incline at Tennessee mine, Southern Col. Herries, Inc. 101
 Inland Steel Co. remodels haulage for lower costs 434
 Locomotive fender 120
 Locomotive maintenance cut by thermal control relays 207

Locomotives redesigned, Pennsylvania Coal & Coke Corp. 310
 Modern methods cut transportation costs 145
 New mine cars 244
 Pit car sprag 232
 Rail bond economies found by formulas 280
 Remote control switch device makes for safer haulage 208
 Safety car holder 417
 Safety catch for slate car 81
 Sand dryer made of discarded boiler flues 32
 Sand from crushed stone is dried in steam boiler 70
 Shovelling lift over car lowered by drop sides 250
 Slotted pipe for hanging trolley wire on high roof 341
 Standardization Division revises track standards 451
 Steel mine cars, D. D. Long 199
 Susquehanna Collieries haulage and hoisting 303
 System builds consistent daily output. A. R. Long 401
 Time studies in underground transportation. D. L. McElroy 395
 Track switch contactor 120
 Trolley pole, welded, for outside tram 118
 West Virginia Coal & Coke mines modernize. I. A. Given 310
 Trucking of coal
 Review of growth in 1931 71
 Trucking of coal. See also Merchandising.
 Tunnel, water. See Drainage.

U

United Mine Workers
 Anthracite operators ask wage reduction 345
 Arkansas-Oklahoma wage agreements signed 301
 Arkansas-Oklahoma wage scale 410
 Begins organization of Southwest 283
 Convention argues policies 87
 Convention ends 125
 Illinois miners to vote again on wage scale 313
 Indiana wage agreement signed 391
 Insurgent union rains ground in Illinois. Northern West Virginia strike falls 419
 Presses for unionization of Oklahoma Fields 313
 Tuscarawas (Ohio) contract signed 418
 Utah Coal Producers' Association James B. Smith elected president 38
 Utilization of coal
 Reduction industries—A.I.M.E. 99

V

Valuation, coal properties. See Economics.
 V-belt suit settled 173

Ventilation
 Air vane to indicate stoppages 384
 Electric automatic mine door 249
 Fan problems get renewed attention (e) 22
 How a synchronous motor was fitted to mine fan 278
 How to make air survey and calculate results. J. N. Williamson (ser. pt. 2) 331
 How ventilation costs can be reduced with profit 153
 How to measure pressure losses. J. N. Williamson (ser. pt. 1) 297
 Joints in blower tubing made with stove pipe 281
 Leakage of air near fan (e) 201
 Remodeled fans give more air. J. F. MacWilliams 17
 Standard doors and uniform installation methods 342
 Stoppings of silt are leakproof 30
 Straight-line ventilation keeps methane diffused 31
 Susquehanna Collieries practice 377
 Synchronous drives for mine fans. R. S. Sage 182
 West Virginia Coal & Coke mines modernize. I. A. Given 319

W

Wages. See Labor.
 Waste
 Board display for campaign on waste 110
 Water, acid. See Drainage.
 Welding
 Anchor pockets for shaft guides welded from pine 119
 Bond welding sequence influences character of weld 447
 West Kentucky Coal Bureau
 Annual election 88
 Winding Gulf Coal Operator's Association
 Annual election 38
 Winter's mucky days (e) 394
 Wire rope
 How to clean and lubricate hoisting ropes 309
 Workmen's compensation
 Willful negligence voids compensation payment 124
 Wyoming Valley Collieries Co.
 Starts operations 390

MINE AND COMPANY INDEX

A

Alabama Fuel & Iron Co., employees' aid plan put in force 282
 American Coal Co. of Allegheny County, Crank Creek reflects experience in pioneer air plant. J. H. Edwards 237
 American Rolling Mill Co., changes in bit clutch oiler 209
 Improved air conveying sand system built at Nellis 280
 Solid collector contacts on hinged trolley harp 166
 Amherst Coal Co., compressor, portable, mounted on trailer 449
 Appalachian Coals Inc., executives ratify charter 34
 Adverse decision by District Court 391
 Files defense in injunction suit 312
 Hearings end 344
 Held up for local test 85
 Named in injunction proceedings 282
 O'Brian vs. Donovan (e) 123
 Organizes 123

B

Bell & Zoller Coal & Mining Co., pinion pulley developed for loading machine motors 449
 Truck for moving loader head in limited clearance 118
 Binkley Mining Co., deep-well pump for de-watering 415
 Boone County Coal Corp., chains adapt apron feeder to automatic control 309
 Refuse handled by subwar conveyor and skips. J. H. Edwards 407
 Buckeye Coal Co., what constitutes fair depletion? A. W. Hesse 191
 Butler Consolidated Coal Co., comparative power costs for hoists and conveyors. F. A. Kolb 241

C

Cherokee Coal & Coke Co.—sales agency formed 122

Chicago, Wilmington & Franklin Coal Co., aspirating equipment for de-dusting. Joints in blower tubing made with stove pipe 281
 Clinchfield Coal Corporation, temporary bond for secondary tracks 446
 Colorado Fuel & Iron Co., celebrates anniversary 210
 Installs new equipment 390
 Consolidation Coal Co., lauded for subsistence gardens 173
 Continental Coal Co., in receivership 452
 Receivership 255
 Revises sales department and methods 88
 Crab Orchard Improvement Co., car sampling 310
 Eccles mines installs air-cleaning plant. I. A. Given 294
 Eccles mine modernization. Brosky & Given 280
 Slave rate positions shown by lights 308
 Crumble Fuel Co., straight line ventilation keeps methane diffused 31

D

Davis Coal & Coke Co., broken fan shaft fixed within 24 hours 207

E

Empire Coal Mining Co., receives certificate of merit for safety 312

F

Ferguson Coal Co., room conveyors add to profit in mining Indiana thin seam 19

G

George F. Lee Coal Co., shaking conveyors
 Glen Alden Coal Co., backfill at Hallstead behind permeable barriers. S. D. Dimmick 227

Breaker burns 420
 Drainage cuts costs at Honey Brook. C. E. Huber 92
 New boiler plant 346
 Power plant moved 124
 Woodward mine cave, explosion, and recovery. P. H. Deyer 187
 Glen Smith Coal Co., "Kleen-Blox" plants installed 170

H

Haddock Mining Co., new breaker 210
 Hamill Coal & Coke Co., wins first aid meet 312
 Hanna Coal Co., consolidates properties 84
 Cut in entry driving costs with mechanized loading. P. R. Paulick 95
 Hartford Coal Co., new plant started 86
 Harwick Coal & Coke Co., safety record 418
 Houston Collieries Co., animated accident board 119
 Carswell mine improvements 92
 Fireboss board, shifting door lights signals 82
 Hudson Coal Co., offers automatic heat service 390
 Refuse disposal 104
 Stripping at Forest City 54

I

Inland Steel Co., aerial tramway solves refuse-disposal problem 432
 Door keeper promotes safety 343
 Builds modern preparation plant to ship better coal and cut operating force 430
 Does modernization pay (e) 423
 Modernizes electrification to reduce costs 427
 Modernizes Wheelwright mines to increase safety and reduce costs. E. R. Price 425
 Remodels haulage to cut transportation cost 434
 Safety a major objective in modernization 437

K

Kemmerer Coal Co., improvements started. . . 312
 Kingston Coal Co., to reopen Gaylord shaft 419
 Koppers Coal Co., board display helps campaign of war on waste. . . 110
 Remote control switch device makes for safer haulage. . . 208
 Swinging car check board saves time. . . 165

L

Lecceony Smokeless Coal Co., production to start. . . 253
 Lehigh Navigation Coal Co., misfire and premature blasting safeguarded. . . 308
 Lehigh Valley Coal Co., how a synchronous motor was fitted to mine fan. . . 278
 Liberty Fuel Co., conveyor and scraper store slack at low cost. . . 414
 Linton Summit Coal Co., check rails stop derailments on mine curves. . . 251
 Logan County Coal Corporation, demand limiter, counter aids adjustment. . . 448
 Rail anvil simplifies removal of cutter chain rivets. . . 165
 Lunagh Coal Co., trouble with new union 450

M

Marion County Coal Co., handling water from two shafts in balanced system. . . 117
 Maryland Coal Co., in receivership. . . 452
 Mead Smokeless Coal Co., washery to be installed. . . 107
 Montevallo Coal Mining Co., British washer installed. . . 5

N

Nelson Creek Coal Co., mechanization in boiler room, J. B. Harvey. . . 107

O

Old Ben Coal Corp., advantages of tipping bits with abrasion resisting alloy, A. F. Brosky. . . 250
 Oliver Coal Co., automatic weighing device for coal. . . 342

P

Peabody Coal Co., larger loads develop high over all efficiency in fast mine hoist duty cycles, Chadbourne & Lee. . . 200
 Pennsylvania Coal & Coke Corp., controller finger base blocks stop arcing and burning. . . 417
 Mine locomotive redesigned. . . 310
 Remodeled fans give more air, J. F. MacWilliams. . . 17
 Safe shotfiring. . . 410
 Phelps Dodge Corp., pit car sprag. . . 32
 Philadelphia & Reading Coal & Iron Co., safety record, Hammond Colliery. . . 418
 Shaking conveyors. . . 53
 Start St. Nicholas breaker. . . 390
 Picklands-Jarner Co., card record for "Keep safe" campaign. . . 20
 Pine Hill Coal Co., Oak Hill colliery electrification cuts costs, W. A. Thomas. . . 442
 Pittsburgh & Midway Coal Mining Co., to sell stoker. . . 38

Pittsburgh Terminal Coal Corp., signs new wage agreement. . . 283
 Pittston Co., dual systems protect pump station, W. Keiser. . . 325
 Joseph Pursglove, Jr. . . 193
 Premier Coal Co., safety record. . . 418
 Pruden Coal & Coke Co., loading machine in thin vein longwall development, J. H. Edwards. . . 185
 Tractor-trailer for rock disposal. . . 10

R

Railway Fuel Co., insurance for 1.5 cents per day, J. M. Dombhart. . . 302
 Raleigh Coal & Coke Co., welded trolley pole
 Pond Creek Pooehontas Co., No. 4 operation started. . . 174
 Powhatan Mining Co., mechanical cleaning promotes consumer acceptance of coal, for outside tram. . . 118
 Red Jacket Consolidated Coal & Coke Co., converter controls with sequence numbers. . . 70
 Feeder cable supported between pole spans. . . 166
 Fender for locomotives. . . 120
 Insulating tops applied to cable reel locomotives. . . 82
 Receiver appointed. . . 418
 Wood ties help difficult paths. . . 80
 Rocky Mountain Fuel Co., signs new wage scale. . . 283

S

Scotia Coal & Coke Co., installing power plant. . . 418
 Sharon Coal & Coke Co., sand dryer made of discarded boiler flues. . . 32
 Scale in feed pipes drilled by coal auger
 Signal Knob Coal Co., operated without fatality since 1907. . . 312
 Sinclair Coal Co., to begin operations. . . 253
 Southern Collieries, Inc., automatic rope uncoupler on incline plane. . . 415
 New Tennessee mine development. . . 101
 Sand from crushed stone. . . 78
 Truck tires ease lumps onto picking table. . . 251
 Splashdam Coal Corp., dry cleaner works without air. . . 105
 Stanton Ironworks Co., Ltd., screening practices. . . 208
 Steelman Coal Corp., dry cleaner works without air. . . 105
 Stonegate Coke & Coal Co., wins safety awards. . . 300
 Susquehanna Collieries Co., air vane to indicate ventilation stoppages. . . 384
 Automatic pump control at slope slump. . . 385
 Compressed air for mining operations. . . 373
 Contactor mounting saves space and reduces hazards. . . 380
 Electric automatic mine door. . . 240
 Electrification. . . 368
 Haulage and hoisting. . . 363
 Herringbone gear, pipe applied to stop noise. . . 448
 Highlights in Susquehanna history. . . 351
 Hoisting rope for circuit in operating man car. . . 385
 Maintenance of equipment. . . 378
 Mechanized mining with scrapers and conveyors. . . 361

Merchandising Susquehanna coals. . . 381
 Mining methods. . . 356
 Model mining number (e). . . 340
 Movable truck aids in filling timber orders. . . 384
 Operating organization at Short Mountain colliery. . . 354
 Power generation at Short Mountain colliery. . . 371
 Preparation practice. . . 386
 Pumping mine water. . . 374
 Safety measures. . . 375
 Safety pushbutton cuts hazards in scraper signal system. . . 387
 Safety stop halts runaway railroad cars. . . 387
 Sanity in progress (e). . . 350
 Signal system gives warning where men cross tracks. . . 385
 Using electric detonators to prevent misfires. . . 447
 Ventilation. . . 377

T

Truax-Traer Coal Co., centrifugal pump emptied by lift shaft in foot valve. . . 165

U

Union Collieries Co., comparative power costs for holsts and conveyors, F. A. Kolb. . . 241
 Shotfivers' dispute in court. . . 36
 Union Pacific Coal Co., bonus base rates for types of equipment. . . 266
 Old Timers' Assn celebrates. . . 282
 United States Coal & Coke Co., gardens for employees. . . 173

V

Valler Coal Co., electrification plays major role in transportation and hoisting (ser. pt. 2). . . 327
 Loading machines at Valler depend on alternating current (ser. pt. 1). . . 299
 Report forms for classifying mine accidents. . . 206
 Safeguarding head, eye, and foot. . . 197

W

West Virginia Coal & Coke Corp., mine telephone accessible when office is closed. . . 343
 Modernization cuts costs, I. A. Given. . . 310
 Portable installation reel prevents cable injury. . . 341
 Slotted pipe for hanging trolley wire on high roof. . . 341
 Standard doors and uniform installation methods. . . 342
 Wheeling Township Coal Mining Co., dispatching saves \$46.44 daily, A. J. Ruffini. . . 263
 Winding Gulf Collieries, briquets of one coal uniform in quality, L. Epperly. . . 15
 Winifrede Block Coal Co., resumed operations. . . 253

Y

Youngstown Mines Corp., injured moved safely in cars with stretcher suspension. . . 252
 Storing of coal by portable conveyors. . . 164

AUTHORS' INDEX

BIXBY, K. R. Modernizing preparation insures steady operation in competitive market. . . 223
Brosky, A. F. Advantages of tippings bits with abrasion-resisting alloy. . . 250
Brosky, A. F. and I. A. Given. Modernization program at Eccles touches every major operating phase. . . 280
CAINE, K. E. Cost accounting for mechanized operations, pt. 4. . . 7
 Maintenance factors in mechanical loading. . . 261
Chadbourne, H. W. How to choose motors for mine fan drives. . . 404
Chadbourne, H. W. and Carl Lee. Larger loads develop higher over-all efficiency in fast mine hoist duty cycles. . . 260
Chambers, Wm. M. For shorter working time. . . 75
DENVER, P. H. Woodward mine cave, explosion, and recovery. . . 187
Dlammick, S. D. Backfill at Hallstead behind permeable barriers. . . 227
Dombhart, J. M. Insurance for 1.5 cents per day. . . 302
EDWARDS, J. H. Cleaning plants present special lighting problems (ser. pt. 2). . . 320
 Illumination an essential in modern preparation plants (ser. pt. 1). . . 303
 Loading machine handles coal and rock in thin-vein longwall development. . . 185
 New crane creek reflects experience gained in operating pioneer air plant. . . 237
 Refuse handled by subway conveyor and skips. . . 407

Emerson, Grady H. Suggestions on the repair of coal mining machinery. . . 109
Epperly, L. Mine briquet plant concentrates on one coal to achieve uniformity in quality. . . 15
GIVEN, IVAN A. Bituminous coal meets market demands by revising preparation (tables). . . 334
 Mechanical cleaning puts Crab Orchard slack in byproduct class. . . 294
 Modernization cuts costs at West Virginia Coal & Coke mines. . . 310
Given, Ivan and A. F. Brosky. Modernization program at Eccles touches every major operating phase. . . 280
Gould, G. B. Modern coal preparation: what the industrial buyer thinks. . . 45
HARVEY, JOHN B. Mechanization in boiler room turns waste into profit. . . 107
Hesse, A. W. What constitutes fair depletion? . . . 191
Huber, Charles F. Drainage tunnel cuts costs at Honey Brook. . . 2
KEISER, W. Dual systems, electrical and mechanical, protect pump station. . . 325
Kolb, F. A. Power costs cut by belt conveyor. . . 241
LEE, CARL and H. W. CHADBOURNE. Larger loads develop higher over-all efficiency in fast mine hoist duty cycles. . . 260
Long, A. R. Consistent daily output per lagger key to economical production. . . 401
Long, Donald D. Why steel mine cars. . . 109
Loscaizo, David A. Slate costs can be controlled. . . 304

McELROY, D. L. Time studies in underground transportation. . . 395
Macfarlane, Malcolm. Modern coal preparation and the railroads. . . 48
MacWilliams, J. F. Remodeled fans give mine more air. . . 17
Miller, R. A. Modern coal preparation as the retailer views it. . . 44
PAULICK, P. R. 61 per cent cut in entry driving costs with mechanized loading. . . 95
Price, E. R. Modernization program, Wheelwright mines, Inland Steel Co. . . 425
Pursglove, Joseph, Jr. Mechanical cleaning promotes consumer acceptance of Powhatan coal. . . 193
RUFFINI, A. J. Dispatching saves \$46.44 daily at mechanized mine in Ohio. . . 362
SAGE, R. S. Synchronous drives for mine fans open way to economics. . . 182
Sullivan, J. V. Attacks editorial treatment of district sales plan. . . 76
THOMAS, W. A. Oak Hill electrification cuts costs. . . 442
Turner, Scott. 1931—Record year in safety. . . 63
WILLIAMSON, J. N. How to make air survey and calculate results (series pt. 2). . . 331
 How to measure pressure losses in ventilation (series pt. 1). . . 297
YANCEY, H. F. Re-treatment of coal middlings (series pt. 7). . . 11

BOSSSES TALK IT OVER—LETTERS

Problems					
Cribbing cars	76	FITZGERALD, LLOYD G.	Give the day-	Discipline—practice what you preach	78
Obtaining discipline	26		men regular work and costs will	Maintenance necessity pyramids when	26
Rehabilitating the injured	163		stay adjusted	jobs are put off and off	26
Stopping tool stealing	204			Where shall we look for waste?	183
Waste elimination	114				
BENNETT, ALEXANDER.		HELLER, F. C.	Cribbing—you might	PROSTEL, EDWARD.	Tackle the big
miner learns quickly	115		slow up haulage	items first in waste elimination	103
Discipline should begin with officials	78		Discipline needs explanation		
Mine maintenance cuts perennial theme	27			QUINN, THOMAS.	Example of how crib-
There is one good system	205	JAMES, THOMAS.	Cribbing—weight, not	bing paid	114
Bullock, Ostel. Cribbing-loading increased	118		number, counts		
20 per cent	118			REPETZKI, DR.	How serious hospital
Let the shop foreman decide in elimin-	162	LEWIS, T. J.	Discipline—something is	cases are handled in Germany	28
inating waste	162		wrong with Mac	Reynolds, J. T. Cribbing—hold haulage	
Bush, Lloyd. Leaky cars discourage crib-	115	LUSTON, W. H.	Maintenance, is the fore-	men responsible	115
bling	116		man prepared to meet new de-	Foremen make mistakes in discipline	77
Buss, Walter E. Cribbing generally pays	116		mands?	Maintenance, who is right in argument	27
Items of maintenance cost always come	27			on cuts?	27
home to roost	183	NICHOLS, F. O.	Mines constantly con-	Russell, James A. Education and mine	204
Speak softly; carry a stick	183		ditioned will pay best in the long	safety	
			run		
C. J. R.				SEESE, J. O.	Discipline—take no action
Discipline—principles for meting	77	NOONE, W. H.	Cribbing—other reasons for	when you're angry	78
it out	77		light cars	Stank, Frank. What price, this expedi-	
Conway, M. B. Discipline is the master	76			ency in handling maintenance job	28
key to mine safety and efficiency	76				