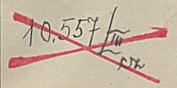
Index to Volume 39

JANUARY TO DECEMBER, 1934







COAL AGE



McGraw-Hill Publishing Company, Inc.

330 West 42d Street New York City



COAL AGE

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



INDEX TO VOLUME XXXIX

January to December, 1934

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, for convenience of reference: January Pages 1-38 February 39-86 March 87-118 April 119-156 May 157-208 June 209-256 July 257-296 August 257-296 August 257-296 October 335-370 October 409-446 December 447-510	Drilling and blasting standards used at an Indiana milne	Inter-industry competition (e)
A	C	Rocky Mountain operators request 8-hour day and 6-day week, when
Accidents Explosion at Derby, Va., mine 367 Monthly fatality reports 36, 84, 206, 331, 406, 444, 510 Welch disaster kills 270 402 Wrexham explosion (e) 372 Accounting. See Management. Alabama Safety revival planned 497 Alabama Mining Institute	Cable guide for mining machine	necessary
Election of officers	Coal classification approaches conclusion at A.I.M.E. meeting	Colorado Northern Colorado organizes agency 407 Report on accident reduction at Rocky Mt. meeting
Institute discusses roof control, health, safety, coal classification and mining education	Cool Age sixth annual buying power survey	To hold annual meeting
Appoints committee on Bureau of Mines. 31 Cincinnati convention dominated by "new deal" problems	Coal, Bituminous Production, monthly	the Hanna Coal Company*458 Cutting machines Factors influencing power requirements for cutting machines. I. H. Coen*74
American Society of Testing Materials	Safety and purification of mine water subjects at meeting	D
Committee busy on coal and coke 401 Anthracite	Holds safety meet 403	Drainage Can draw off profits as well as water 183
Anthracite burner code	Anthracite code held up	Coal Mining Institute discusses safety and purification of mine waters at meeting 21 Fiber pipe protects against acid at new blowhole at Hanna Coal Co
cite region	Bituminous code conference postponed 32 Bituminous code proposed amendment 364 Bituminous industry reviews first year under code operation 380 Change in enforcement proposed 505 Coal price control still stands 440	Economics
Anthracite Institute Louis C. Madeira III elected head°288	Code Authority budget submitted	Appalachian Coals proposes campaign to protect coal trade against hydro-electric power
В	Controversy over proposal for collection of data	Business taking stock of New Deal (e) 371 Capital-goods activity needed for re-
Relgium	or correlation scheme for Evansville, Ind.,	covery program (e)
Air-lock cages through ventilation shafts. F. C. Cornet	market region	fuels
Election of officers	under NRA 33 Willard E. Hotchkiss in charge of NRA research and wage differentials327	Estimated variations in total cost, in cents per ton, on basis of present hourly rates from costs based on eight-hour day and five-day week 141

Fourth party to new social experiment (e)	G	side day labor included in union con-
Hydroelectric activity increases 507 Indirect allocation of tonnage (e) 297	Ground movement and subsidence A.I.M.E.	tracts for various bituminous fields, in cents per hour 66
Interinductry competition (e) 40	meeting	Wages—union scales for strip mining, in- diana and Illinois
Massed forces against hydro-electric projects (e)	Crundy field-Roseann mine leads in daily	Wagner bill (e)
tive expenses and sales income per net	capacity:*304	order 254
ton, November, 1933	7.7	Law and Legislation
Socialization of coal at conference on	H	Kentucky mine law passed
"America's Public Ownership Program" 116	Harlan County Coal Operators Assn.:	Law and realities (e)
Scrip limitation proposed	Officers elected	Lubrication Mine-car lubrication
Shorter hours (e) 119	Air-lock cages through ventilation shafts. F. C. Cornet	Mine-car indirection
Subsistence homestead project for Iowa 154 TVA remembers (e)	Holsting kinks	M
Wide gains marked up by coal in fight for stabilization in 1933	Locomotive made into stationary hoist. *396	141
"Yardsticks" (e)		Maintenance
Electric Furnace-Man Inc. Annual convention	I	Adequate inspection is key to proper maintenance
Electricity	Illinois:	Ball bearings on motor having nitting in-
Air cools motor generator set in Wick mine 321	To use cement made from state coal 506 Illinois Mining Institute	dicating grease overflow248 Broken shaker arms held by wooden roller78
Blowers have eliminated failures due to heat at Hanna Coal Company495	Safety problems take lead at meeting., 279	roller
Canacitor affords lightning protection to	Underground operation, research safety and coal cleaning feature annual meeting	bearings246 Equipment parts should cost no more
sub-station at Hanna Coal Co	Elects onicers	from manufacturer than from local
Catenary suspension for trolley wires. 249 Cincinnati exposition of new equipment. 234	Illinois Coal Operators Assn.: Election of officers	dealer (e)
Control circuit protects substation equipment284	Indiana Coal Mining Institute	Hanna Coal Company's maintenance work 477
Current value may increase in A.C. holding coils	Face preparation and safety star at meeting272	Light unit for aligning track
DC equipment performance checked		Locomotive has suspension bar attached to side frame
against tonnage	K	Locomotives change to improve axle lubrication
Factors influencing power requirements for cutting machines. I. H. Coen *74	Kentucky	Motor temperature 361 New River & Winding Gulf Electrical &
Floating batteries cut demand and improve voltage. J. H. Edwards344	State Department of Mines and Min-	Machanical Institute feature mainte-
Hanna Coal Company's electrification 472	erals expands 288	nance hints
How to charge mine storage batteries. J. E. Borland		Points way to lower costs per ton 178
How to check up on d.c. power losses in underground transportation 26 Insulating hitching	L	Rack for storing steel made from used
Light loads can be carried without	Labor	Shamener for drill steel employs drill
transformer oil	Anthracite factions continue warfare. 508 Anthracite insurgents rebuffed by	itself 437 Sprocket puller 398
Load dispatching slashes power cost at Appalachian mine. A. F. Brosky 95 Load factor and its determination 147	United Mine Workers 442 Anthracite insurgents threaten general	Tool facilitates turning granknin
volt service at Summerlee mine *76	atrike	Truing of cylindro-conical drums320 Wear of locomotive axles361
One-man test arrangement for arma- tures	Anthracite strike fades	Wiring diagrams of bridging-type mine telephones*358
Power cost economies revealed in thorough electrification survey 175	Appalachian agreement in full 200 Appalachian agreement sets 35-hour	Management
Real switches in automatic signal system	week with wage increases 152 Appalachian wage agreement conference 115	Accounting for fixed assets. J. C. McNeil. 354 Challenged by demands of new deal 159
Remote control of fan and borehole feeder uses single control wire 29	Average daily earnings under the code. 137 Bituminous Coal Labor Board personnel	Efficiency report enables executives to
Sequence starting system for D.C. motors	for Division	plan production and cut costs*360 Foreman's responsibilities under NRA.
Series operation of locomotives	Bituminous labor boards continue activity	J. J. Rutledge
Short rail bonds made standard at large mines	Bituminous wage stabilization in 1933 65 Board decides captive mine row 82	Reports necessary to manager (e) 209
Spring field-coil supports improve old motors	Bonus payments discussed at A.I.M.E. congress	Routing of a report (e)
Sun shading may increase transformer rating	Elections to determine who should speak for mines not parties to Appalachian	McGraw-Hill Co anniversary month 292
Switch at hoist controls shaft gate locks111	agreement	Mechanization Anthracite drives for lower costs and
Trench cable preferred over pole line and borehole at Hanna Coal Co494	Houde Engineering Corp. case decision (e)	higher quality in 1933 44 Broaden mechanization concepts—Ameri-
Wire requirements reduced by unusual hook-up286	Hourly rates for inside and outside labor included in Tennessee-Georgia. South-	can Mining Congress 220 Casualties reduced at Harry Taylor mine
Wiring diagrams of bridging-type mine telephones	ern Tennessee and western Kentucky	by mechanization methods. Charles Dorrance
Electrification	Hours reduction and wage increases pro-	Cincinnati exposition of new equipment. 234 Coal saw average 229 tons per shift at Anjean. J. H. Edwards 388
Connected loads indicated by lamps above panels191	posed at bituminous coal code conference	Anjean. J. H. Edwards
Tipple crossing signal built without relays	Labor board decisions in August 366 National Bituminous Coal Labor Board	Conveyor mining in Southern fields337 Conveyors, scrapers and loaders dis-
Explosions Chlorine in the air (e)	hands down decisions 508 National Labor Board busy with case 289	cussed at Rocky Mountain meeting. 125 Cost-cutting by mechanization 162
	National Labor Board gets captive mine dispute	Mechanical loading at Wick mine of Ingle
	NRA issues revised order in wage and	Co
	hour controversy	mechanical loaders
F	endums at operations under contract with United Workers 289 Scrip committee in Alabama 331	Safety gains with increased mechaniza- tion—Rocky Mt. meeting 132
Federal Emergency Relief Administration	Scrip payments studied 195	Union Pacific decreases labor costs but in- creases wages. Eugene McAuliffe 259
Changes in handling orders 81	Southwest deep mines win wage cuts., 289 Stoppages mark adoption of aborter day, 199 Subsistence bomestead plan to include	Working area of mines concentrated to a minimum (e)
First Ald and Mine Rescue Kentucky safety meet held	miners	Merchandising
West Virginia Coal & Coke Corp. hold	Subsistence homestead project for Iowa 154 Thirty-hour week demand ill-timed (e) 371	Anthracite burner standards 153 Briquetting progress opens new market
West Virginia safety day	Tonnage, yardage and deadwork scales in- cluded in union contracts for various	opportunities. E. J. Tournier 309 Campaign for dustless coal 79
West Virginia safety meets	bituminous fields (supplement in	Coal industry presses war against sub-
Freight Rates	March number) Union (e)	Continue war on substitutes 250 Equitable Building, N. Y., returns to
Coal prepares to fight higher rate plea 309	bituminous neids 103	Hanna Coal Company's merchandising
Onio decision to be appealed	United Mine Workers president demands 30-hour week	policies
Railroad executives propose increase. 331 Utah coal rates cut	U. S. Labor Department proposes work sharing during slack times 205 Wage rates treble but labor costs per ton	Improving preparation with regard to
Fuel Labor organizations continue war against	decrease at Union Pacine. Eugene	ing Congress
substitute fuels	McAuliffe	
Fuel and Energy Planning Board Study of fuel problems planned by NRA 33	ing established in union agreements for various districts	England

		Great Britain-Dust-wetting quality of
European market	Drill, one man	Great Britain—Enlargements and con-
of merchandising		
Sales of stokers in September break record 497	Drill, wagon 333 Dust collector 444 Electrical aids 208	Great Britain-Experiments with sheath-
Southern Illinois organizing to promote	Electrical aids	Great Britain—Report on incombustible
Stoker merchandising plan developed by	Electricity	dusts for dusting
Dickson & Eddy 403	Arc arrester	Great Britain—Danger from sparks 4
Stoker sales increase 403	Cables, mining	Great Britain—Composition of coal
Stokers gain in Birmingham	Cap lamp 445 Coil winder 155	Great Britain-Clay as tamping material 3
Iliah and Wyoming coal men map mar-	Coll Winder	Great Britain—De-ashing of coal 2 Great Britain—Hydraulic cartridge 2
ket fight	Drive bases	India—Sarang colliery—water transporta-
turning fines into domestic coke 421	Magnetic separator	tion of coal3
Merchandising. See also Sales Agencies.	Drive pages 165	tion of coal
Mine Inspectors Institute of America	Motor, flanged-head	gasification of coal
Safety at any cost is theme at meeting 231	Motoreducers, vertical	gasification of coal
Mine timbers	Motors and controls	Vertical cutting machines sold in Ger-
Longface and room workings at Salem Hill263	Portable measuring instruments 270	many and England
Pillar drawing (e)	Pressure governors 370 Pushbutton 207	many and England
Mineral Planning Committee	Relays207	wales—Tests on strength of packwalls. 3
Appointment by President 250	Starter, motor	Nystagmus (e)
Mining	Relays	
Our mining language (e) 258		
Mining Methods	Switch, disconnecting 445 Switch, instrument 295 Switches outdoor	0
Anthrocite strippings exemplify new	Switches, outdoor 334	
technique in southern fields299	Switch starting	Obituary
	Switch, vacuum	Archbold, John B 20
Anjean. J. H. Edwards	Switches85	Barnes, Clyde F. Baumgartner, J. F.
Crapo mine sets goal for low cost and	Switches outdoor	Berry, Percy D.
Crapo mine sets goal for low cost and minimum degradation. I. A. Given. 411		Bracken, Michael J.
Directness (e)	Gas mask with speaking diaphragm 117	Clark, B. M.
Face preparation opens new vistas for modernization 165	Gas indicator	Barnes, Clyde F. Baumgartner, J. E. Berry, Percy D. Bracken, Michael J. Campbell, William 44 Clark, B. M. Clark, Fred K. Collins, Justus Cookson, Donald H. 11 Cranston, R. M.
	Gun, graphite	Cookson Donald W
Mines	Hook and roller bar	Cranston, R. M.
Mines 260 Face preparation discussed at Indiana Institute meeting 272	Gun. graphite	Cranston, R. M. Crawford, William W.
Ground movement and subsidence report	Joint, hose	Cribbs, John D.
—A.I.M.E. meeting 107	Lead packing	Darlow, Edward H
Hanna Coal Company's mining methods. 400	Loader*37 *332	Devlin, Robert V.
Longface and room workings at Salem	Loader, gangway	Dalrymple, James 44 Darlow, Edward H Devlin, Robert V Dimmick, S. D Divon, Samuel
Hill mine	Loader, semi-portable	Donaldson, J. A
new deal	Locknut408	Emmons, James A
Now Monarch mine has different methods	Locomotive diesel alectric-drive	Emmons, Louis Cole
of operating loaders	Locomotive, fireless*333 *369	Evans, William
New wrinkles in face operation—American Mining Congress 222	Locomotive, gasoline	Farley, S. T.
Technique progressed in bituminous mines	Motor, self-protected *005	Grav J T In
in 1933	Paint. aluminum	Griffith, C. A.
	Puller goes and pinion	Dimmick S. D. 33
N	Puller, spike	Hix. Charles H
	Pump, centrifugal 445	Koch, William H.
National Assn. of Lubricating Grease Mirs.	Price tools	Helery William L. 40 Hickman, R. H. 50 Hix. Charles H. 3 Koch, William H. 29 Lee, J. T. 3 Mellon, R. B. 3 Mercer, A. J. 50 Moore, P. J. 51 Morrison, C. R. 51 Morrison, C. R. 51 Morrison, C. R. 51 Morrison, C. R. 51
Mine-car lubrication discussed 437	Pump. rotary	Mercer, A. J.
National Association of Purchasing Agents Cleveland convention	Spray nozzle	Moore, P. J
	Rejection control	Morss, Everett
National Coal Assn. Annual meeting discusses bituminous	Stokers	Myers, Lilburn T 29
coal problems and future of the in-	Daniel de la contraction de la	Neff Oscar F
3	Surfacing, nard	
dustry	Thermostats, bearing 207	O'Brien, Edmund
dustry	Surfacing, nard 207 Thermostats, bearing 88 Tools, light mining 370 Tractor 200	O'Brien, Edmund 3 Oliver, Clinton L 44
Company store committee named 250	Surfacing hard 207 Thermostats, bearing *86 Tools, light mining 370 Tractor 208 Tractor, diesel *85	O'Brien, Edmund 3 Ollver, Clinton L. 44 Overbey, Edwin W. 40 Pack, John C.
Company store committee named 256 Convention favors two-year extension of bituminous code-control plan 415	Surfacing	O'Brien. Edmund 3 Oliver. Clinton L 44 Overbey. Edwin W 40 Pack. John C 8 Peale. Rembrandt 550
Company store committee named 256 Convention favors two-year extension of bituminous code-control plan 415	Truck motor 296 Valve bronze 155 Valve control	OBrien Edmund 3 Oliver Clinton L 44 Overbey, Edwin W 40 Pack, John C 8 Peale, Rembrandt 50 Perry, R. M. 36
Company store committee named	Truck motor 296 Valve bronze 155 Valve control	OBrien. Edmund 3 Oliver. Cilinton L 44 Overbey. Edwin W 40 Pack. John C. 8 Peale. Rembrandt 500 Perry. R. M 36 Randall, H. G. 38 Riddle, A. M 8
Company store committee named 256 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government rela- tions—committeemen named 497 Moves for federal tax on natural gas 34	Truck motor	OBrien. Edmund 3 Oliver. Clinton L 44 Overbey. Edwin W 40 Pack. John C. 8 Peale. Rembrandt 500 Perry. R. M. 36 Randall, H. G. 3 Riddle, A. M. 8 Saxman. M. W. Sr. 511
Company store committee named 206 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government rela- tions—committeemen named 497 Moves for federal tax on natural gas 34 Special committee studies legislation 324 United Mine Workers and National Code	Truck motor	Morrison. C. R. 51 Morss. Everett 3 Myers. Lilburn T. 29 Nason. Albert J. 40 Neff. Oscar E. 20 O'Brien. Edmund 3 Oliver. Clinton L. 44 Overbey. Edwin W. 40 Pack. John C. 8 Perry. R. M. 36 Randall. H. G. 36 Riddle. A. M. 8 Saxman. M. W. Sr. 51 Seaton. Joshua 30 Smith. Edward. George 40
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government rela- tions—committeemen named 497 Moves for federal tax on natural gas . 34 Special committee studies legislation 324 United Mine Workers and National Code Association seek natural gas agree-	Truck motor	OBrien Edmund 3 Oliver Clinton L 44 Overbey, Edwin W 40 Pack, John C 8 Peale, Rembrandt 50 Perry, R M 36 Randall, H G 3 Riddle, A M 8 Saxman, M W Sr, 511 Seaton, Joshua 36' Smith, Edward George 400 Smith, James M 256
Company store committee named	Truck motor	OBrien Edmund 3 Oliver Clinton L 44 Overbey, Edwin W 40 Pack, John C 8 Peale, Rembrandt 50 Perry, R. M 36 Randall, H. G. 3. Riddle, A. M. Sr. 51 Seaton, Joshua 36 Smith, Edward George 40 Smith, James M. 25 Sewart, Harry R. 256
Company store committee named	Truck motor	O'Brien Edmund 3 O'Brien Edmund 3 O'Brien Edmund 3 O'Brien Edmund 4 O'Brien Edmund 5 O'Brie
Company store committee named 206 Convention favors two-year extension of bituminous code-control plan	Truck motor	O'Brien Edmund 3 Oliver Clinton L 44 Overbey, Edwin W 40 Pack, John C 8 Peale, Rembrandt 550 Perry, R M 360 Randall, H G. 3 Riddle, A M 8 Saxman, M W Sr 51 Seaton, Joshua 36 Smith, Edward George 400 Smith, James M 256 Stewart Harry R 256 Treel, Robert 40 Thomas, Herbert A 33 Waddell George 156
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government rela- tions—committeemen named 497 Moves for federal tax on natural gas 34 Special committee studies legislation 324 United Mine Workers and National Code Association seek natural gas agree- ment 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Board	Truck motor	O'Brien. Edmund
Company store committee named 20 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government relations—committeemen named 497 Moves for federal tax on natural gas 32 Special committee studies legislation 324 United Mine Workers and National Code Association seck natural gas agreement 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Board Divorced from NRA 115	Truck motor 296 Valve hoonze 155 Valve control 445 Valve gate 448 Valve non-metallic disk 98 Valves non-metallic disk 98 Valves 207 Wall seal 370 Welder portable 445 Welding alds 996 Welding bench 408 Welding bench 408 Welding electrode 156, 334, 445 Welding spectacles 37 Welding spectacles 37 Welding and cutting aids 37 Wire lubricator 407	OBrien Edmund 3 Oliver Clinton L 44 Overbey, Edwin W 40 Pack, John C 8 Peale, Rembrandt 50 Perry, R. M 36 Randall, H. G. 3 Riddle, A. M. Sr. 51 Seaton, Joshua 36 Smith, Edward George 40 Smith, James M. 25 Stewart, Harry R. 25 Teel, Robert 40 Thomas, Herbert A 33 Waddell, George 15 Wade, Henry 15 Weaver, John H. 256 Wedeklind, Ernest H. 256
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government rela- tions—committeemen named 497 Moves for federal tax on natural gas 34 Special committee studies legislation 324 United Mine Workers and National Code Association seck natural gas agree- ment 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Board Divorced from NRA 115 National Safety Council	Truck motor 296 Valve hoonze 1155 Valve control 445 Valve gate 448 Valve, gate 948 Valve, non-metallic disk 986 Valve 9207 Wall seal 370 Welder, portable 445 Welding sids 296 Welding bench 296 Welding electrode 156, 334 Welding electrode 156, 334 Welding apprehence 337 Welding apprehence 337 Welding apprehence 337 Welding spretacles 337 Wire lubricator 407 Wood preservative 208	O'Brien Edmund 3 Oliver. Clinton L 44 Overbey, Edwin W 40 Pack, John C 8 Peale, Rembrandt 550 Perry, R M 30 Randall, H G. 3 Riddle, A M 8 Saxman M W Sr. 511 Seaton, Joshua 36' Smith, Edward George 40 Smith, James M 25' Stewart, Harry R 25' Teel, Robert 40 Waddell, George 15- Wadde, Henry 15- Wedekind, Ernest H 25' Wedekind, Ernest H 25' Wedekind, Ernest H 25' Wedekind, Ernest H 25' Wehte, Arthur S 444
Company store committee named 20 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government relations—committeemen named 497 Moves for federal tax on natural gas 32 Special committee studies legislation 324 United Mine Workers and National Code Association seck natural gas agreement 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Board Divorced from NRA 115	Truck motor 296 Valve, hoonze 155 Valve, control 445 Valve, gate 448 Valve, non-metallic disk 98 Valve, non-metallic disk 98 Valves 9207 Wall seal 370 Welder, portable 445 Welding aids 98 Welding bench 408 Welding bench 156, 334, 445 Welding equinment 85 Welding augument 985 Welding spectacles 937 Welding and cutting aids 937 Wire lubricator 407 Wood preservative 208 New River & Winding Gulf Coal Mining	O'Brien Edmund 3 Oliver Clinton L 44 Overbey, Edwin W 40 Pack, John C 8 Peale, Rembrandt 550 Perry, R M 36 Randall, H G. 3 Riddle, A M 8 Saxman, M W Sr 51 Seaton, Joshua 36 Smith, Edward George 40 Smith, James M 25 Stewart Harry R 25 Teel, Robert 4 33 Waddell, George 15 Wadde, Henry 15 Weaver, John H 25 Wedekind, Ernest H 25 White, Arthur S 446 White, John P 406
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government rela- tions—committeemen named 497 Moves for federal tax on natural gas 34 Special committee studies legislation 324 United Mine Workers and National Code Association seek natural gas agree- ment 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Board Divorced from NRA 115 National Safety Council Mine safety problems discussed at Cleve- land meeting 424	Truck motor 296 Valve hoone 155 Valve control 445 Valve gate 446 Valve non-metallic disk 986 Valve non-metallic disk 986 Valve 370 Welder portable 445 Welding aids 996 Welding bench 408 Welding electrode 156, 334 Welding electrode 156, 334 Welding spectacles 937 Welding spectacles 937 Welding mid cutting aids 937 Wire lubricator 407 Wood preservative 208 New River & Winding Guif Coal Mining Institute	Smith. James M. 256 Smith. James M. 256 Stewart. Harry R. 256 Toel. Robert 40 Thomas. Herbert A. 33 Waddell. George 15- Wade. Henry 15- Weaver. John H. 256 Wedekind. Ernest H. 256 White. Arthur S. 444 White. John P. 406
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government rela- tions—committeemen named 497 Moves for federal tax on natural gas 34 Special committee studies legislation 324 United Mine Workers and National Code Association seck natural gas agree- ment 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Board Divorced from NRA 115 National Safety Council Mine safety problems discussed at Cleve- land meeting 424 Natural Gas	Truck, motor	Smith
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government rela- tions—committeemen named 497 Moves for federal tax on natural gas 32 Special committee studies legislation 324 United Mine Workers and National Code Association seek natural gas agree- ment 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Board Divorced from NRA 115 National Safety Council Mine safety problems discussed at Cleve- land meeting 424 Natural Gas Coal program for combating gas 328 Line in central Mississippi planned by	Truck motor	Smith. James M. 256 Smith. James M. 256 Stewart. Harry R. 256 Toel. Robert 40 Thomas. Herbert A. 33 Waddell. George 15- Wade. Henry 15- Weaver. John H. 256 Wedekind. Ernest H. 256 White. Arthur S. 444 White. John P. 406
Company store committee named 20 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government relations—committeemen named 487 Moves for federal tax on natural gas 34 Special committee studies legislation 324 United Mine Workers and National Code Association seek natural gas agreement 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Beard Divorced from NRA 115 National Safety Council Mine safety problems discussed at Cleveland meeting 424 Natural Gas Coal program for combating gas 328 Line in central Mississippi planned by Natural Gas Service Corp. 149	Truck motor 296 Valve hoonze 155 Valve control 445 Valve gate 448 Valve, gate 948 Valve, non-metallic disk 98 Valve 0207 Wall seal 370 Welder portable 445 Welding sids 296 Welding bench 408 Welding electrode 156, 33 445 Welding equipment 85 Welding equipment 985 Welding spectacles 37 Welding and cutting aids 37 Wire lubricator 407 Wood preservative 208 New River & Winding Gulf Coal Mining Institute Holds safety meet 403 New River & Winding Gulf Electrical & Mechanical Institute Load factor and its determination 147 Maintenance discussion at meeting 409	Smith
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government rela- tions—committeemen named 497 Moves for federal tax on natural gas 32 Special committee studies legislation 324 United Mine Workers and National Code Association seek natural gas agree- ment 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Board Divorced from NRA 115 National Safety Council Mine safety Council Mine safety problems discussed at Cleve- land meeting 424 Natural Gas Coal program for combating gas 328 Line in central Mississippi planned by Natural Gas Service Corp 149 Losses to natural gas recently 195	Truck motor	Smith
Company store committee named	Truck motor 296 Valve hoonze 155 Valve control 445 Valve gate 448 Valve non-metallic disk 98 Valve non-metallic disk 98 Valve 370 Wall seal 370 Welder portable 445 Welding aids 98 Welding bench 408 Welding electrode 156, 334, 445 Welding equinment 85 Welding equinment 95 Welding and cutting aids 937 Wire lubricator 407 Wood preservative 208 New River & Winding Guif Coal Mining Institute Holds safety meet 403 New River & Winding Guif Electrical & Mechanical Institute Load factor and its determination 147	Smith. James M. 265 Smith. James M. 265 Stewart. Harry R. 255 Toel. Robert . 400 Thomas. Herbert A. 333 Waddell. George . 155 Wade. Henry . 165 Weaver, John H. 256 Wedekind. Ernest H. 256 White. Arthur S. 444 White. John P. 406 Operators Assn. of the Williamson Field: Election of officers . 506 Permissible plates . 504
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government relations—committeemen named 497 Moves for federal tax on natural gas 34 Special committee studies legislation 324 United Mine Workers and National Code Association seck natural gas agreement 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Board Divorced from NRA 115 National Safety Council Mine safety problems discussed at Cleveland meeting 424 Natural Gas Coal program for combating gas 328 Line in central Mississippi planned by Natural Gas Service Corp 149 Losses to natural gas recently 195 Ninceapolis may use natural gas 195 N.C.A. moves for federal tax on natural gas 34	Truck motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33,3 Waddell, George 15-5 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers 506 P Personnel Changes
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government relations—committeemen named 497 Moves for federal tax on natural gas 324 United Mine Workers and National Code Association seek natural gas agreement 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Board Divorced from NRA 115 National Safety Council Mine safety problems discussed at Cleveland meeting 424 Natural Gas Coal program for combating gas 328 Line in central Mississippi planned by Natural Gas Service Corp 149 Losses to natural gas recently 195 Minneapolis may use natural gas 195 N.C.A. moves for federal tax on natural gas 34 National Coal Association and United	Truck motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33,3 Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers Permissible plates 504 P Personnel Changes Aldridge, A. B. 367
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government relations—committeemen named 497 Moves for federal tax on natural gas 34 Special committee studies legislation 324 United Mine Workers and National Code Association seck natural gas agreement 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Board Divorced from NRA 115 National Safety Council Mine safety problems discussed at Cleveland meeting 424 Natural Gas Coal program for combating gas 328 Line in central Mississippi planned by Natural Gas Service Corp 149 Losses to natural gas recently 195 Ninceapolis may use natural gas 195 N.C.A. moves for federal tax on natural gas 34	Truck, motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33,3 Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers Permissible plates 504 P Personnel Changes Aldridge, A. B. 367
Company store committee named 20 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government relations—committeemen named 497 Moves for federal tax on natural gas 34 Special committee studies legislation 324 United Mine Workers and National Code Association seek natural gas agreement 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Board Divorced from NRA 115 National Safety Council Mine safety Council Mine safety Problems discussed at Cleveland meeting 424 Natural Gas Coal program for combating gas 328 Line in central Mississippi planned by Natural Gas Service Corp 149 Losses to natural gas recently 195 Minneapolis may use natural gas 195 N.C.A. moves for federal tax on natural gas National Coal Association and United Mine Workers seek natural gas agree-	Truck, motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33,3 Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers Permissible plates 504 P Personnel Changes Aldridge, A. B. 367
Company store committee named 20 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government relations—committeemen named 497 Moves for federal tax on natural gas 32 Special committee studies legislation 324 United Mine Workers and National Code Association seck natural gas agreement 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Board Divorced from NRA 115 National Safety Council Mine safety problems discussed at Cleveland meeting 424 Natural Gas Coal program for combating gas 328 Line in central Mississippi planned by Natural Gas Service Corp 149 Losses to natural gas recently 195 Minneapolis may use natural gas 195 N.C.A. moves for federal tax on natural gas National Coal Association and United Mine Workers seek natural gas agreement 195 Need to the committee of the c	Truck motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33,3 Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers Permissible plates 504 P Personnel Changes Aldridge, A. B. 367
Company store committee named	Truck motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33,3 Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers Permissible plates 504 P Personnel Changes Aldridge, A. B. 367
Company store committee named	Truck motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33,3 Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers Permissible plates 504 P Personnel Changes Aldridge, A. B. 367
Company store committee named	Truck motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33,3 Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers Permissible plates 504 P Personnel Changes Aldridge, A. B. 367
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government relations—committeemen named 497 Moves for federal tax on natural gas 34 Special committee studies legislation 324 United Mine Workers and National Code Association seek natural gas agreement 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Beard Divorced from NRA 115 National Safety Council 424 Natural Gas 328 Line in central Mississippi planned by Natural Gas Service Corp 149 Losses to natural gas recently 195 Minneapolis may use natural gas 195 N.C.A. moves for federal tax on natural gas 34 National Coal Association and United Mine Workers seek natural gas agreement 332 Bit. cutter 407 Blasting machine 407 Blowers portable 290 Blowers Portable 290 Elinewisters 117	Truck, motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33,3 Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers Permissible plates 504 P Personnel Changes Aldridge, A. B. 367
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government relations—committeemen named 497 Moves for federal tax on natural gas 34 Special committee studies legislation 324 United Mine Workers and National Code Association seek natural gas agreement 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Beard Divorced from NRA 115 National Safety Council 424 Natural Gas 328 Line in central Mississippi planned by Natural Gas Service Corp 149 Losses to natural gas recently 195 Minneapolis may use natural gas 195 N.C.A. moves for federal tax on natural gas 34 National Coal Association and United Mine Workers seek natural gas agreement 332 Bit. cutter 407 Blasting machine 407 Blowers portable 290 Blowers Portable 290 Elinewisters 117	Truck motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33, Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers 504 P Personnel Changes Aldridge, A. B. 367 Allen, Thomas 509 Archer, E. T. 443 Baile, Hobart B. 327 Bail, H. W. 509 Ballard, C. C. 292 Beddoe, A. H. 405 Beeson, Alex 292 Bennett, Joseph 206 Bird, Byton 206 Blair, C. S. 443 Bluth, Marc G. 405
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan 415 Executive, legislative, government relations—committeemen named 497 Moves for federal tax on natural gas 34 Special committee studies legislation 324 United Mine Workers and National Code Association seek natural gas agreement 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Beard Divorced from NRA 115 National Safety Council 424 Natural Gas 328 Line in central Mississippi planned by Natural Gas Service Corp 149 Losses to natural gas recently 195 Minneapolis may use natural gas 195 N.C.A. moves for federal tax on natural gas 34 National Coal Association and United Mine Workers seek natural gas agreement 332 Bit. cutter 407 Blasting machine 407 Blowers portable 290 Blowers Portable 290 Elinewisters 117	Truck, motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33, Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers 504 P Personnel Changes Aldridge, A. B. 367 Allen, Thomas 509 Archer, E. T. 443 Baile, Hobart B. 327 Bail, H. W. 509 Ballard, C. C. 292 Beddoe, A. H. 405 Beeson, Alex 292 Bennett, Joseph 206 Bird, Byton 206 Blair, C. S. 443 Bluth, Marc G. 405
Company store committee named 200 Convention favors two-year extension of bituminous code-control plan *415 Executive, legislative, government relations—committeemen named *497 Moves for federal tax on natural gas 34 Special committee studies legislation 324 United Mine Workers and National Code Association seek natural gas agreement 195 National Industrial Recovery Act On guard!—government administration of industry (e) 2 National Labor Beard Divorced from NEA 115 National Safety Council 444 National Gase Council 444 Coal program for combating gas 328 Line in central Mississippi planned by Natural Gas Service Corp 149 Losses to natural gas recently 195 Minneapolis may use natural gas 195 N.C.A. moves for federal tax on natural gas series 34 National Coal Association and United Mine Workers seek natural gas agreement 195 See Equipment 407 Blasting machine 408 Boller, integral-furnace 408 Breaker, Vertical pick 155 Bronze bar stock 332 Ed. 332 Ed. 332 Ed. 408 Breaker, Vertical pick 155 Bronze bar stock 332 Ed. 332	Truck, motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33, Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers 504 P Personnel Changes Aldridge, A. B. 367 Allen, Thomas 509 Archer, E. T. 443 Baile, Hobart B. 327 Bail, H. W. 509 Ballard, C. C. 292 Beddoe, A. H. 405 Beeson, Alex 292 Bennett, Joseph 206 Bird, Byton 206 Blair, C. S. 443 Bluth, Marc G. 405
Company store committee named	Truck, motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33, Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers 504 P Personnel Changes Aldridge, A. B. 367 Allen, Thomas 509 Archer, E. T. 443 Baile, Hobart B. 327 Bail, H. W. 509 Ballard, C. C. 292 Beddoe, A. H. 405 Beeson, Alex 292 Bennett, Joseph 206 Bird, Byton 206 Blair, C. S. 443 Bluth, Marc G. 405 Bruth, Marc G. 4
Company store committee named	Trick, motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33, Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers 504 P Personnel Changes Aldridge, A. B. 367 Allen, Thomas 509 Archer, E. T. 443 Baile, Hobart B. 327 Bail, H. W. 509 Ballard, C. C. 292 Beddoe, A. H. 405 Beeson, Alex 292 Bennett, Joseph 206 Bird, Byton 206 Blair, C. S. 443 Bluth, Marc G. 405 Bruth, Marc G. 4
Company store committee named	Truck, motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33, Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers 504 P Personnel Changes Aldridge, A. B. 367 Allen, Thomas 509 Archer, E. T. 443 Baile, Hobart B. 327 Bail, H. W. 509 Ballard, C. C. 292 Beddoe, A. H. 405 Beeson, Alex 292 Bennett, Joseph 206 Bird, Byton 206 Blair, C. S. 443 Bluth, Marc G. 405 Bruth, Marc G. 4
Company store committee named	Truck, motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33, Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers 504 P Personnel Changes Aldridge, A. B. 367 Allen, Thomas 509 Archer, E. T. 443 Baile, Hobart B. 327 Bail, H. W. 509 Ballard, C. C. 292 Beddoe, A. H. 405 Beeson, Alex 292 Bennett, Joseph 206 Bird, Byton 206 Blair, C. S. 443 Bluth, Marc G. 405 Bruth, Marc G. 4
Company store committee named	Truck, motor	Smith, James M. 256 Smith, James M. 256 Stewart, Harry R. 257 Teel, Robert 400 Thomas, Herbert A. 33,3 Waddell, George 155 Wade, Henry 156 Wedekind, Ernest H. 256 White, Arthur S. 444 White, John P. 406 Operators Assn. of the Williamson Field: Election of officers Permissible plates 504 P Personnel Changes Aldridge, A. B. 367

Combon Part B. 1997 Freedrich M. 1997 Combon Part B. 1997 Combon Part	500	Power Constation	Roof Control
Delichter J. D. 1. 255	Crites, V. H	Jewell Ridge Coal Corp. reverts to pri-	Arching and bumps. T. L. McCall, S. C.
Deletter J. D. 1. 255	Gebhart, Barton R	Kings Station mine cuts costs with pri-	Kentucky State Dept. of Mines and Min-
Grathin, Edward (1987) Randy Thomas (1986) Randy	Cross, O. M		Paramount consideration (e) 258
Grathin, Edward (1988) Randy Thomas (1988) Randy	Dickinson, John L	plant	Throwing weight on pillars (c) 210
Grathin, Edward (1988) Randy Thomas (1988) Randy	Dohrer, F. J	coal D Jamieson	What happens when mineral is ex-
Grathin, Edward (1988) Randy Thomas (1988) Randy	Epperly, L	"steam-generating unit" and cut fuel	Transfer Tra
Grathin, Edward (1988) Randy Thomas (1988) Randy	Everett, H. D	Power cost economies revealed in electri-	C
Grathin, Edward (1988) Randy Thomas (1988) Randy	Fieldner. A. C	Scotia power plant cuts energy con-	
Grithin, Edward Grithin, I. H. Grithin, Grit	Finneran, A. F	sumption 25%. J. H. Edwards213 Soft coal installs mine generating	Accident prevention makes new record in
Grathin, Edward (1988) Randy Thomas (1988) Randy	Frey, Frank G	plants	A.I.M.E. discuss at congress 101
Grathin, Edward (1988) Randy Thomas (1988) Randy	Gebhart, Barton R		"B" and Stillwater mines win safety
Grathin, Edward (1988) Randy Thomas (1988) Randy	Gilett, W. H	veyor loading	Alabama plans revival
Levis, William E. 100 Licht Hoot. Thomas E. 110 Licht Hoot. Thomas E. 120 Licht Hoot. Thomas E.	Gottschalk, Charles 83	mine	nureau of Mines funds reduction cur-
Levis, William E. 100 Licht Hoot. Thomas E. 110 Licht Hoot. Thomas E. 120 Licht Hoot. Thomas E.	Graham, R. S	higher quality in 1933 44	Casualties reduced at Harry Taylor mine
Leint Hotel Thomas E. 110 Light Hotel Thomas	Gunter, L. C	eliminate night weigh boss397	Dorrance
Levis, William E. 100 Licht Hoot. Thomas E. 110 Licht Hoot. Thomas E. 120 Licht Hoot. Thomas E.	Heatherman, W. J	to conveyor	Cincinnati exposition of new equipment. 234
Leint Hotel Thomas E. 110 Light Hotel Thomas	Higgins, T. P	importantpt. 1 209, pt. 2 314	and purincation of mine waters at
Leint Hotel Thomas E. 110 Light Hotel Thomas	Hood, O. P. 443	Bituminous preparation developments in 1933*60	
Levis, William E. 100 Licht Hoot. Thomas E. 110 Licht Hoot. Thomas E. 120 Licht Hoot. Thomas E.	Hudson, Roy P	Central cleaning plant helps Avella Dis- trict recover lost markets, Joseph	Drilling and blasting safety standards used at an Indiana mine 323
Leint Hotel Thomas E. 110 Light Hotel Thomas	Ilsley, L. C	Pursglove, Jr	meeting
Leint Hotel Thomas E. 110 Light Hotel Thomas	James, H. D	minimum degradation. I. A. Given 411	Handhold on car so brakeman need not
Leint Hotel Thomas E. 110 Light Hotel Thomas	Jenkins, W. J	space	Hanna Coal Company's salety work 480
Leint Hotel Thomas E. 110 Light Hotel Thomas	Jones, Marshall J. H	tate inspection	Holmes Safety Assn. makes safety awards 149
Leint Hotel Thomas E. 110 Light Hotel Thomas	Kennedy, D. C	having specific industrial uses. E. M.	Illinois Institute discusses safety prob-
Levis, William E. 100 Licht Hoot. Thomas E. 110 Licht Hoot. Thomas E. 120 Licht Hoot. Thomas E.	Kriegh, McKinley 327	Gowen breaker of Buck Mountain Coal	Indiana Institute discusses safety 272
Levis, William E. 100 Licht Hoot. Thomas E. 110 Licht Hoot. Thomas E. 120 Licht Hoot. Thomas E.	Lafferty, John	Mining Co. provides high efficiency and low cost in anthracite preparation *89	Is safety imperiled by new deal?—
Lowry, John F. 84. 202 Lowry, John F. 84. 202 Lowry, John F. 84. 202 Marks, J. 0. 0. 3. 377 Marks, J. 1. 3. 307 McDermolt, Harold Marks, G. 1. 3. 307 McDermolt, Harold McDermolt, Harold McDermolt, Harold McDermolt, Harold McDermolt, J. 307 McSarry, James McSherry, James McSherr	Lee, Carl	Improvements in preparation—American Mining Congress	Insulating hitching*398
Lowry, John F. 84. 202 Lowry, John F. 84. 202 Lowry, John F. 84. 202 Marks, J. 0. 0. 3. 377 Marks, J. 1. 3. 307 McDermolt, Harold Marks, G. 1. 3. 307 McDermolt, Harold McDermolt, Harold McDermolt, Harold McDermolt, Harold McDermolt, J. 307 McSarry, James McSherry, James McSherr	Lewis, John L	Island Creek modernizes a modern	cuss safety
Malckin, John F.	Lightfoot, Thomas E	crushing facilities. J. H. Edwards. 121	National Safety Council discussed miners'
McGarr, A. B. 327 New plant construction 140 251 New plant construction 140 151 New plant construction	Long, James A	cone system of cleaning. A. B. Shutts. *383	safety and health at Cleveland*424
McGarr, A. B. 327 New plant construction 140 251 New plant construction 140 151 New plant construction	Macklin, John F84, 256	Magnet for tramp iron set in bottom	Record board gives accident prevention
McGarr, A. B. 327 New plant construction 140 251 New plant construction 140 151 New plant construction	Marks, J. B	Naomi installs new air operated jig sys-	Pocahontas-Tug River safety council
Morew J. D. A.	McConnell, Fred S 405	New design for shaker-screen at Consoli-	Rocky Mt. meeting discusses safety
Morew J. D. A.	McGary, A. B	New plant construction149, 251,	Safety council adopts code for machine
Morew J. D. A.	McSherry, James	New topworks construction in 1933. 67	Screening neadirance promotes safer
Morew J. D. A.	McVeigh, R. S. 405 Meguire, K. U. 328	Ohio section A.I.M.E. surveys values of preparation plants	Sealing mines discussed at A.I.M.E.
Morew J. D. A.	Milington, J. T	Picking tables equipped with day blue	Suffocating gob pyrite (e) 2
Morew J. D. A.	Mitchell. W. C	Surface preparation at the Hanna Coal	Ten-year safety campaign at Phelps Dodge pays. G. C. Davis*123
Oldham, R. J. Oldham, Wade H. Oldham, Wale H.	Morrow, Hugh	Surface preparation too often neglected	Sales Agencies
Oldham, R. J. Oldham, Wade H. Oldham, Wale H.	Moses, Harry	Swinging boom adds three slack-loading	and statistics
Oldham, R. J. Oldham, Wade H. Oldham, Wale H.	Nellen, William F	Technique progressed in bitumirous	and experiences
Ott. Lee 206 292 Parkburst. C. W. 367 Paulick, P. R. 54, 405 Peter, G. F. 367 Polk, W. G. 443 Potter, Mark W. 243 Robert, Friskine 266 Richards, Hayden D. 405 Robert 366 Robert 47 Robert 47 Robert 57 Robert	Oldham D I		Eastern Coals Inc. submits plan for or-
Ott. Lee 206 292 Parkburst. C. W. 367 Paulick, P. R. 54, 405 Peter, G. F. 367 Polk, W. G. 443 Potter, Mark W. 243 Robert, Friskine 266 Richards, Hayden D. 405 Robert 366 Robert 47 Robert 47 Robert 57 Robert	Oldham Wade H	Drainage can draw off profits as well as water	Hocking Coals, Inc., elects officers 498
Paulick P. R	Ott. Lee	Pumping nints	southern Ohio coals390
Richardson Forrest 296 Railroad favoritism (e) 88 Robson W M. 292 Relief coal plan (federal) discontinued. 116 Robson W M. 292 Relief coal plan (federal) discontinued. 116 Southern Appalachian Coal Operators Assn. Operators and miners protest opening new mines for relief coal. 343 Scalfe, Alan M. 84 Refuse Disposal Scully, Thomas A. 256 Scully, Thomas A. 256 Sundly, Thomas A. 256 Sundly, Thomas A. 256 Sundly, Thomas A. 256 Sundly, Thomas A. 255 Sundgrass, B. W. 509 Stadell, C. W. 509	Paulick, P. R		Northern Coals Inc. organized to
Richardson Forrest 296 Railroad favoritism (e) 88 Robson W M. 292 Relief coal plan (federal) discontinued. 116 Robson W M. 292 Relief coal plan (federal) discontinued. 116 Southern Appalachian Coal Operators Assn. Operators and miners protest opening new mines for relief coal. 343 Scalfe, Alan M. 84 Refuse Disposal Scully, Thomas A. 256 Scully, Thomas A. 256 Sundly, Thomas A. 256 Sundly, Thomas A. 256 Sundly, Thomas A. 256 Sundly, Thomas A. 255 Sundgrass, B. W. 509 Stadell, C. W. 509	Polk. W. G		handle Unio Coals
Richardson Forrest 296 Railroad favoritism (e) 88 Robson W M. 292 Relief coal plan (federal) discontinued. 116 Robson W M. 292 Relief coal plan (federal) discontinued. 116 Southern Appalachian Coal Operators Assn. Operators and miners protest opening new mines for relief coal. 343 Scalfe, Alan M. 84 Refuse Disposal Scully, Thomas A. 256 Scully, Thomas A. 256 Sundly, Thomas A. 256 Sundly, Thomas A. 256 Sundly, Thomas A. 256 Sundly, Thomas A. 255 Sundgrass, B. W. 509 Stadell, C. W. 509	Potter, Mark W	R	Purchasing agents discuss problems at
Richardson Forrest 296 Railroad favoritism (e) 88 Robson W M. 292 Relief coal plan (federal) discontinued. 116 Robson W M. 292 Relief coal plan (federal) discontinued. 116 Southern Appalachian Coal Operators Assn. Operators and miners protest opening new mines for relief coal. 343 Scalfe, Alan M. 84 Refuse Disposal Scully, Thomas A. 256 Scully, Thomas A. 256 Sundly, Thomas A. 256 Sundly, Thomas A. 256 Sundly, Thomas A. 256 Sundly, Thomas A. 255 Sundgrass, B. W. 509 Stadell, C. W. 509	Richards, Hayden D	Railroads	Western Pennsylvania Committee to study
Rocke, Josephine Roncaglione, L. 36 Rose, Don 36 Rose, Don 36 Rose, Don 36 Rose, B. 4. 309 Scalle, Alan M. 304 Scalle, Alan M. 305 Scully, Thomas A. 256 Sherwood, R. H. 116 Smith, Andrew H. 116 Smith, Molton, Jr. 255 Shonderass, B. W. 509 Stadell, C. W. 509 Statell, C. W. 509 Start, Charles E. 154 Sunder, E. H. 443 Shender, E. H. 443 Thomas, Bertram D. 292 Thomas, Bertram D. 302 Thomas, William D. 405 Thomas, William D. 405 Thomas, William D. 405 Troutman, Grayson P. 405 Troutman, Gra	Richardson, A. C	Price rebate? (e)	Somerset County Coal Operators' Assn. 439
Smith, Andrew H. 116 Smith Molton, Jr. 255 Smodgrass, B. W. 202 Snodgrass, B. W. 202 Spindler, G. R. 116 Spindler, G. R. 116 Stadell, C. W. 509 Stuart, Charles E. 154 Stuart, Charles E. 154 Stuart, David T. 116 Thomas, Bertram D. 292 Thomas, B. A. 367 Thomas, D. A. 367 Thomas, William D. 328 Troutman, Grayson P. 405 Troutman, Grayson P. 405 Truk, Lafagette 200 Tukiler, Herbert 367 Smith, Molton, Jr. 255 Research Research Research Research Research Rattelle Memorial Institute offers funds Stoffers Stuart Loavid T. 116 Bituminous research	Robson, W. M	Relief coal plan (federal) discontinued. 116	Southern Appainchian Coal Operators Assu.
Smith, Andrew H. 116 Smith Molton, Jr. 255 Smodgrass, B. W. 202 Snodgrass, B. W. 202 Spindler, G. R. 116 Spindler, G. R. 116 Stadell, C. W. 509 Stuart, Charles E. 154 Stuart, Charles E. 154 Stuart, David T. 116 Thomas, Bertram D. 292 Thomas, B. A. 367 Thomas, D. A. 367 Thomas, William D. 328 Troutman, Grayson P. 405 Troutman, Grayson P. 405 Truk, Lafagette 200 Tukiler, Herbert 367 Smith, Molton, Jr. 255 Research Research Research Research Research Rattelle Memorial Institute offers funds Stoffers Stuart Loavid T. 116 Bituminous research	Rose. Don	new mines for relief coal 443	
Smith, Andrew H. 116 Smith Molton, Jr. 255 Smodgrass, B. W. 202 Snodgrass, B. W. 202 Spindler, G. R. 116 Spindler, G. R. 116 Stadell, C. W. 509 Stuart, Charles E. 154 Stuart, Charles E. 154 Stuart, David T. 116 Thomas, Bertram D. 292 Thomas, B. A. 367 Thomas, D. A. 367 Thomas, William D. 328 Troutman, Grayson P. 405 Troutman, Grayson P. 405 Truk, Lafagette 200 Tukiler, Herbert 367 Smith, Molton, Jr. 255 Research Research Research Research Research Rattelle Memorial Institute offers funds Stoffers Stuart Loavid T. 116 Bituminous research	Rozene, H. A	Refuse Disposal	Industry charts feature control program 505
Smith, Andrew H. 116 Smith Molton, Jr. 255 Smodgrass, B. W. 202 Snodgrass, B. W. 202 Spindler, G. R. 116 Spindler, G. R. 116 Stadell, C. W. 509 Stuart, Charles E. 154 Stuart, Charles E. 154 Stuart, David T. 116 Thomas, Bertram D. 292 Thomas, B. A. 367 Thomas, D. A. 367 Thomas, William D. 328 Troutman, Grayson P. 405 Troutman, Grayson P. 405 Truk, Lafagette 200 Tukiler, Herbert 367 Smith, Molton, Jr. 255 Research Research Research Research Research Rattelle Memorial Institute offers funds Stoffers Stuart Loavid T. 116 Bituminous research	Scollard, Michael	cost by belts and shuttle conveyors *6	NRA approves tonnage allocation schemes to end correlation squabbles 325
Spindler, G. R	Sherwood, R. H	Underground rock-disposal system321	Operators debate proration program at Chamber of Commerce meeting 251
Spindler, G. R	Smith. Molton, Jr	Anthracite research seeks new markets.	Proration (e)
Thomas, William D. 328 in 1933 or planned for 1934. 54 Tobey, J. E. 328 in 1933 or planned for 1934. 53 Troutman, Grayson P. 405 Tuck Lafayette 206 Tuck Lafayette 367 Tuck Lafayette 36	Spencer, K. A	H. G. Turner	Steam trick on tour
Thomas, William D. 328 in 1933 or planned for 1934. 54 Tobey, J. E. 328 in 1933 or planned for 1934. 53 Troutman, Grayson P. 405 Tuck Lafayette 206 Tuck Lafayette 367 Tuck Lafayette 36	Stadell, C. W	for bituminous research	Stokers
Thomas, William D. 328 in 1933 or planned for 1934. 54 Tobey, J. E. 328 in 1933 or planned for 1934. 53 Troutman, Grayson P. 405 Tuck Lafayette 206 Tuck Lafayette 367 Tuck Lafayette 36	Stuart, David T	named	Stores
Thomas, William D. 328 in 1933 or planned for 1934. 54 Tobey, J. E. 328 in 1933 or planned for 1934. 53 Troutman, Grayson P. 405 Tuck Lafayette 206 Tuck Lafayette 367 Tuck Lafayette 36	Thomas, Bertram D	Bituminous research needs three point program, C. E. Williams	
Troutman, Grayson P. 405 Tuck. Lafayette 206 Tutwiler, Herbert 367 Tutwiler, Herbert 367 Tutwiler, Herbert 367	Thomas, William D	Coal researches in progress or completed	Company stores. David Andrew
Tuck Lafayette 206 oins Bituminous Coal Research 443 Anthracite strippings exemplify new 299 Wadleigh, F. R. 256 (e) 17 Wayner, E. B. 367 (e) 17 Wayner, E. B. 368 (e) 18 Wethalk, Elmer 509 (e) 18 Wechanization with scrapers, conveyors at williams, Clyde E. 256 (e) 27 Williams, Ray 206 Safety gains with increased mechanization and woodhead, Sam 256 (292 tion in West 132 Hanna Coal Co. 496	Troutman, Grayson P	Increased research recorded for 1933. 53	Stripping
Wadleigh F. R	Tuck Lafayette	joins Bituminous Coal Research 443	
Watson, M. M. Webb, Houston V. Wetter, J. William Whiteman, M. R. Wildman, W. Y. Wildman, W. Y. Wildman, W. Y. Williams, Clyde E. Williams, Clyde E. Williams, Ray Woodhead, Sam 116 IVA states attricted in Coal Mining Institute Denver meeting Mechanization with scrapers, conveyors Mechanization with scrapers, conveyors Wildman, W. Y. 366 509 Problems of code administration and williams, Clyde E. Safety gains with increased mechanization in West 135 Surveying—sights for turning curves at Hanna Coal Co. 496	Wadleigh, F. R	(e)	Sinclois strip mines employ trailer haul-
Wetter, J. William Whiteman, M. R. Sop Wichake, Elmer Wildman, W. Y. Willmans, Clyde E. Williams, Clyde E. Williams, Ray Woodhead, Sam Sop Enver meeting Mechanization with scrapers, conveyors and loaders discussed at meeting. Problems of code administration and Williams, Clyde E. Safety gains with increased mechanization tion in West Safety gains with increased mechanization in West Woodhead, Sam Sopplies Inventory control also plays part in cost reduction Surveying—sights for turning curves at Hanna Coal Co. 496	Watson, M. M. 110 Webb, Houston V. 200	Rocky Mountain Coal Mining Institute	Technique progressed in bituminous mines
Wichake, Elmer 509 and loaders discussed at meeting. 125 wildman, W. Y. 366, 509 Problems of code administration and Williams, Clyde E. 256 merchandising discussed 135 williams, Ray 206 Safety gains with increased mechaniza- tion in West 132 Woodhead, Sam 256, 292 tion in West 133 West 135	Wetter, J. William	Denver meeting	in 1933 20
Williams, Clyde E. 256 merchandising discussed*135 reduction Surveying—sights for turning curves at Woodhead, Sam 256, 292 tion in West	Wierhake, Elmer	and loaders discussed at meeting 125 Problems of code administration and	Inventory control also plays part in cost
Woodhead, Sam	Williams, Clyde E. 25.	merchandising discussed	Surveying-sights for turning curves at
	Woodhead, Sam256, 29	2 tion in West	Hanna Coal Co

Taxes Accounting for fixed assets. J. C. Mc-Nell American Mining Congress opposes additional taxes for Bureau of Mines. Anthracite exempted from duty	Handhold on car so brakeman need not grasp edge	Power and fuel from lignite 367 TVA to foster coal use 324 University of Illinois holds utilization course 1 Illinois holds utilization 288 University of Illinois stages course on coal utilization 288 V Ventilation A.I.M.E. discusses at congress 101 Air lock cages through ventilation shafts. F. C. Cornet 353 Costly air (e) 734 Fan modernization in Susquehanna Collieries 347 Hanna Coal Company's ventilation 484 Hides costs and losses worth uncovering 184 High speed ventilation (e) 257 Hillman Coal & Coke reduce power bills with new fans 417 Hinge provides automatic door closing 286 Measurement of mine air pressures. R. S. Lewis 275 Virginia Coal Operators' Assn. Election of officers 255 W Weight recorder and indicator, automatic, eliminate night weigh boss 397 Welding Pump plungers welded at low cost 398 Straightening axless by arc-welding 248 West Virginia Coal Mining Institute Code influences on mining problems discussed at meeting 59 Economic and engineering problems discussed at meeting 50 Economic and engineering problems discussed at meeting 50 Economic and engineering problems discussed at meeting 51 Economic and Economic 51 Economic 51 Economic 51
MINE AND COMPANY INDEX		
A Ajax Coal Co. Conveyor mining	Consolidated Coal Co., developing new mine near Flint, Mich	Cutting, drilling and blasting practices. 458 Detachable seat makes brakemen safer 498 Drainage work 485 Electrification 472 Employee relations 487 Fiber pipe protects against acid at new blowhole 510 Hanna of Ohio 510 Maintenance 477 Management 451 Mechanical loading 462 Merchandising policies 490 Mining methods 455 Operations of the Hanna Coal Company 52 Safety 480 Screening headframe promotes safer operation 480 Sights for turning curves 498 Surface preparation 480 Transportation 480 Transportation 480 Wentilation 480 Wentilation 480 Wentilation 480 Wentilation 480 Hardy-Burlingham Mining Co. Conveyor mining 480 Hardy-Burlingham Mining Co. Conveyor mining 480 Hill & Suender. Anthracite strippings exemplify new technique 294 Hillman Coal & Coke Co. New fans cut power bills 180 Womer bills 180 Nomi mine rebuilds its tipple adding washer 780 Hocking Coals. Inc. Ohio sales agency modeled on Appalachian pattern 780 Hild development 180 Howard Collieries Reel switches in automatic signal system 180 Hudson Coal Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions tight 287 Imperial Colliery Co. Locking bolt and nut keep suspensions t

Officers elected	N	R
Officers elected	Nashville Coal Co. Purchases Dixle Bee mine	Radiant Fuel Corp. Coking widens domestic outlet for Illinois fines
	Puritan mine	8
Jewell Ridge Coal Corp. Conveyor mining. 337 Reverts to private power generation. 92	New River Co. Arcweld straightening has endured time test 248 Electrical etcher used for dating ball bearings 246	Saxman Coal & Coke Co. Conveyor mining 340 Scotla Coal & Coke Co. New power plant cuts energy consumption 25%. J. H. Edwards
K	Oil transfer switches developed for 550- volt service	Sinclair Coal Co. Organizes Delta Coal Mining Co. to strip coal in Illinois 402 Snow Hill Coal Corp. To open new shaft
Kehoe-Berg Coal Co. Breaker loads blonded coal on single track. A. B. Shutts. *383 New breaker to be erected	Norfolk & Western Ry. Hand hold on car so brakeman need not grasp edge*112 Leaf springs on top of rail operate scale switches	Snow Hill Coal Corp. To open new shaft mine Stonega Coke & Coal Co. Conveyor mining
Leckie Collieries Co. Conveyor mining. 337	Light unit for aligning track *104 Locomotive motor housing *145 Non-catching hook is used on trip re- tarder rope *249 Tipple crossing signal built without re-	substation equipment
Leckie Smokeless Coal Co. Coal saw averages 229 tons per shift at Anjean.	Tipple crossing signal built without re- lays	т
J. H. Edwards	Northern Coals, Inc. Official organ started 444 Ohio sales agency modeled on Appalachian pattern	Tennessee Products Inc. Sharpener for drill steel employs drill itself*437
Adding to producing facilities 497	0	υ
Lehigh Navigation Coal Co. Anthracite strippings exemplify new technique*299 Fire destroys shaft	Old Ben Coal Corp. Reorganization planned Owl Creek Coal Co. Shaking conveyors equipped with self-contained power loading head discussed at Rocky Mt.	Union Collieries Co. Aerial tramway installed at Renton
Lincoln Coal Co. Power plant at mine uses pulverized coal. D. Jamieson 386 Linton-Summit Coal Co. Holmes Associa-	meeting•125	Union Pacific Coal Co. Developments in mechanization discussed at Rocky
tion certificate award	Panther Coal Co. Car endgates are lifted without use of hooks	Mt. meeting
Little Betty Mining Corp. Fire destroys surface buildings	Roseann mine leads Grundy field in daily capacity "304 Paris Purity Coal	Salety trophies awarded Wage rates treble but labor costs per ton decrease. Eugene McAulifie 259 U.S. Coal & Coke Co. Conveyor mining. 337 United States Fuel Co. Holmes Association
Lynn Camp Coal Co. Grundy field development	Peahody Coal Co May be senarated from	certificate award
М	Insull group 290 Reopens mine 403 Truing of cylindro-conical drums. 320 Penn Anthracite Mining Co. Casualties reduced by mechanization methods.	V
MacLean Coal Co. Purchased by C. T. Worley and F. J. Curtis 84 Madeira, Hill & Co. Anthracite strippings	Charles Derrance #410	Virginia Lee Coal Corp. Grundy field development
exemplify new technique	Phelps Dodge. Ten-year safety campaign. G. C. Davis Pond Creek Pocahontas Co. Floating batteries cut demand and improve voltage. J. H. Edwards Rack for storing steel made from used	Wells Elkhorn Coal Co. Conveyor mining.*337 Wellston No. 2 Coal Co. Contracts for
cost \$1,000 a month	rail **397 Princeton Mining Co. Kings Station mine cuts costs with private power plant. **267 Pruden Coal & Cohe Co. Conveyor mining 341	tipple equipment 38 West End Coal Co. Leases Mineral Springs colliery 364 West Point Marion Coal Co. Fire destroys tipple, dumping station and conveyor 252
Monarch Anthracite Mining Co. Organized to operate Mineral Springs colliery. 443	Hand-operated cable guide for mining machine	Winding Gulf Collieries. Conveyor mining. 337 Windred Collieries. Conveyor mining. 337
	AUTHORS' INDEX	
A NDREW, DAVID. No disagreement except 73	Scotia power plant cuts energy con- sumption 25%	McNeil, John C. Accounting for fixed assets354
Ashcraft, C. E. Power scraper speeds culm recovery and reduces cost217	Tipple modernization includes complete crushing facilities and triples loading points	Monthly cost sheets as a byproduct of ledger postings
BORLAND, J. E. How to charge mine storage batteries 228	GIVEN, IVAN A. Low-cost and mini-	DURSGLOVE, JOSEPH, JR. Central
Brosky, Alphonse F. Load dispatching slashes power cost at Appalachian mine	mum degradation Michigan coal.*411 Trailer haulage meets test at Sinclair strip mines	cleaning plant helps recover lost markets211
COEN. I. H. Factors influencing power requirements for cutting machines *74	JAMIESON, D. Pulverized coal plant in- stalled at Nanty-Glo operation of	RUTLEDGE, J. J. Mine foreman faces added responsibilities under NRA 317
Cornet, F. C. Air lock cages through ventilation shafts	Lincoln Coal Co 386	SHUTTS, A. B. Kehoe-Berg breaker loads blended coal on single track*383
DAVIS. GILBERT C. Ten-year safety campaign at Phelps Dodge pays. 123 Dorrance. Charles. Casualties reduced by	LEWIS, ROBERT S. Ironing out diffi- culties in the measurement of air.*275	TOURNIER, E. J. Briquetting progress opens new market opportunities. 309 Turner, H. G. Anthracite research seeks
unusual mechanization methods at anthracite colliery	MAYER, ERWIN M. Flotation may be used to separate coals having specific industrial uses 17	out new markets
EDWARDS, J. H. Coal saw averages 229 tons per shift at Anjean 388	McAuliffe, Eugene. Wage rates treble but labor costs per ton decrease at	
Floating batteries cut demand and improve voltage	Union Pacific Mines	WILLIAMS, CLYDE E. Bituminous research needs three point program. *58