

# Index

- Abel, Fredrick 190, 191
- abandoned workings, problems of 16, 18  
32, 42, 56, 108, 142, 153, 168, 170,  
226
- access/egress  
coal 12, 107, 111  
metal 63, 125, 135, 181, 215, 217, 226  
*See also* ladders and man-haulage
- accidents  
coal mines, at specific  
Aberdare 61  
Apedale 188  
Ardsley Main 77  
Brandling Main (Felling) 41, 43  
Camerton 193, 195  
Darley Main 48, 61, 81–2  
Eaglebush 46  
Hartley 74, 125  
Haswell 43–4, 75, 184  
Haydock 102  
Heaton Main 18, 42  
Jarrow 43  
Ketley 105  
Kirklees Hall 79  
Maudlin 190  
Morfa 191  
Nitshill 185  
Oaks 120  
Pontypool 191  
Risca 61  
St Helen's 19  
St Hilda's 41, 43  
Seaham 190, 193  
Success (Newbottle) 18  
Talk o' th' Hill 120  
Wallsend 43, 55  
Wednesbury Oldfield 105
- metal mines, at specific  
Botallack 30, 239  
Carn Brea 31, 44, 226
- Dolcoath 31, 169, 230  
East Pool 173  
East Wheal Rose 32, 44  
Levant 32, 219  
Penbryn 227  
Poldory 26  
Snailbeach 144, 168  
South Tamar Valley 93  
Talacre 160  
United Hills 32–3  
Wheal Agar 168  
Wheal Owles 160  
Wheal Providence 26
- relationship with trade cycle 169–71  
*see also* explosions and timeline
- accident mortality rates  
coal 1–3, 13, 17–19, 24, 54–5, 105–6,  
116, 122, 124, 164, 171, 186, 191  
German colliers, amongst 81  
metal 2, 25, 44, 53, 132–4, 163–5, 170,  
220, 235–239  
slate 171  
*see also* mortality
- Acts of Parliament)  
Coal Mines Act 1850 2, 8, 100, 102,  
104, 107, 110, 112, 124, 126, 243  
Coal Mines Act 1855 2, 108–12, 114,  
118, 225  
Coal Mines Act 1872 5, 78, 99, 116,  
122, 124–5, 158, 171, 188  
Coal Mines Act 1887 100, 125, 156,  
191, 195–6  
Coal Mines Act 1911 181, 197, 211  
Employers' Liability Act 1880 115  
factory and workshop Acts 56, 103,  
113, 126, 137–8, 140, 152, 177,  
201–2, 206, 210, 211
- Inspection and Regulation of Coal  
Mines Act 1860 2, 110–11, 113–14,  
116, 119–20, 128, 144

- Metalliferous Mines Regulation Act 1872 9, 37, 66, 151–2, 157–8, 160, 162–3, 165, 173, 176, 177, 180–2, 202, 219–25, 230, 232–3, 246–7, 247, 249
- Metalliferous Mines Regulation Act 1875 (with respect to Annual Returns) 177
- Metalliferous Mines Regulation Act (application to the Isle of Man) 1891 177
- Mines (Prohibition of Child Labour Underground) Act 1900 177
- Mines (Rescue and Recovery) Act 1910 176–7, 181, 197
- Mines and Collieries Act, 1842 4, 7, 40, 46, 56, 60–61, 65–7, 78, 112, 129, 140, 148, 244
- Notification of Accidents Act 1906 19, 177
- Public Health Act 1875 156
- Quarries Act 1894 153, 175
- Railway Regulation Act 1840 78
- Slate Mines (Gunpowder) Act 1882 174, 177
- Truck Acts 153  
*see also* timeline
- adventurers 86, 144, 169, 217
- afterdamp 15; *see also* carbon monoxide
- age and risk of accident 234–9
- agent (mine) 52, 53, 73, 141, 145, 160, 166, 195, 209, 229, 232
- Alexander, Inspector W. 101, 123, 154
- Alston Moor 62, 66
- Altofts Gallery 193, 197
- America 93, 130, 172, 213, 215
- Andrews, Dr. F. W. 201
- ankylostomiasis *see* hookworm
- Arlidge, J. T. 202
- arsenic 38, 166, 201
- Ashley, Lord 56, 59, 72
- asthma, miners' 20, 34, 137, 138, 211; *see also* dust and silicosis
- Atkinson, Inspector J. 101, 112, 117, 155, 187, 192, 197
- Atkinson, W. 168, 187, 192, 197
- Australia 129, 172, 209
- Ayrton, A. S. 111, 119
- 'bad air' theory of disease 33, 139, 140, 162, 166, 173, 199
- Baker, Inspector J 101, 123, 154
- bâl maiden 65; *see also* women's employment
- Bankhart, James 136
- Bargain (miners') 84, 89–94, 160, 213–14, 216, 218, 223, 232–4, 241
- Barham, Charles 25–6, 64, 89, 95
- Barmote Court (also *see* mineral laws) 89, 156
- barrack accommodation 162, 176, 187
- beat diseases 20, 211; *see also* rheumatism
- Beattie, J. M. 210
- Beche, Henry de la 43, 55, 77, 79, 244
- Belgium 41, 61, 81, 176
- benefit societies/sick clubs 88, 95–6, 141
- Bickford, William 51
- Bills (Parliamentary including Private Members) 8, 60, 67, 74, 77–80, 82–4, 88, 99–100, 103, 107–8, 111–13, 121–2, 124, 128, 142–9, 151, 190, 216, 218  
*see also* timeline
- black powder *see* gun powder
- 'black spittle' 20
- Blackwell, Kenyon 44, 82–4, 100, 120
- blasting 8, 72, 77, 79, 80, 83–4, 97, 100, 107–9, 111, 119–20, 128–9; *see also* gun powder and high explosives
- coal 22, 125, 128, 184, 188, 190–93, 231
- metal 31, 35, 40, 51–2, 141–2, 157, 199, 202, 208, 221, 223, 226–8, 240
- mortality 26, 54, 67, 134
- Blee, Robert 24–5, 78, 235
- Boer War 165–6, 172, 198, 209; *see also* South Africa
- boiler explosions 18, 26, 32–3, 105, 134
- borer/hand drilling/picking 13, 37, 63
- Boycott, A. E. 179
- Boyd, R. Nelson 102, 114
- breathing apparatus 197; *see also* respirators
- Broad Oaks Iron Works 185

- Brough, Inspector Lionel 101, 114, 123, 154
- Bruce, Henry 113–14, 121–3, 127–9, 146
- Buddle, John 15–6, 42–3, 45, 48, 56, 73, 110, 184–5, 186
- Burt, Thomas 115, 120, 124, 187
- Camborne 136, 200, 218, 228, 230, 236
- Camborne School of Mines 48–9
- candles 1, 13, 28, 33–4, 90, 93, 139, 226–8; *see also* illumination
- carbon dioxide (carbonic acid gas/ chokedamp) 12–13, 15, 18, 34, 106, 117, 121, 139, 161–2, 165, 181, 199
- carbon monoxide 15, 30, 163, 176; *see also* afterdamp
- Carn Brea mine 96, 220, 229
- Cayley, E. S. 103
- certified managers 9, 103, 158, 163, 181, 197, 223
- Chamberlain, Joseph 192–3, 196
- changing house 31, 37, 51, 55, 140, 149, 159, 181, 200
- Chartism 59, 71, 86, 87
- Chesterfield and Derbyshire Institute of Engineers 185
- child labour 4–5, 69, 78
  - coal 7, 40, 43, 56–8, 60, 112–14, 120, 244
  - metal 62–3, 65–6, 90, 129, 148, 177
- Childrens Employment Commission 56, 62, 64, 66, 72, 95, 211
- chokedamp *see* carbon dioxide
- Clive, George 111, 113–14, 128, 145
- clothing 20, 37
- code of conduct
  - coal
    - statutory 28, 72, 83, 103–4, 107–8, 110–11, 147–8, 196
    - voluntary 40, 107
  - metal
    - statutory 89, 91, 144, 147–8, 157, 163
    - voluntary 40, 52–3*see also* discipline and special rules
- compensation *see* workers compensation
- competitive working environment 85, 234
- compressed air power 165, 192, 199, 202, 208
- convictions *see* prosecutions
- copper tipped tools 40, 51–3, 91
- Cornwall 13, 23–5, 30–31, 48–9, 55, 62–3, 70, 78, 83–5, 87–90, 96, 128, 130, 132, 136, 142, 144, 146–7, 151–2, 155, 157, 165, 168–9, 172, 180, 198, 200, 202, 205, 209, 217, 226
- Cornwall Institute, (Royal) 24–5
- Cornwall Polytechnic Society, (Royal) 24, 49, 55, 78, 31
- coroners 24, 41, 73, 75, 78–9, 102, 104, 107–9, 111, 120–21, 161
- coroners' court (impartiality) 111, 121
- cost book finance 53, 86, 153, 167–8, 232
- court officers (impartiality) 163
- Cowen, Joseph 115
- crime rates 127
- Crommelin mines, Ballymena Co. Antrim 224
- Crook, Joseph 112
- Cross, Richard Assheton 183, 186–88, 192, 199
- Cunynghame, Henry 180
- cutting, coal 196, 211; *see also* Hewing
- Cwmorthin Slate Company 174
- 'dangerous trades' 5, 71, 136, 201
- Daniels, William 77
- Darley Main colliery 46, 53, 62
- Davy, Humphrey 45
- Davy lamp 45, 54, 56; *see also* safety lamp
- defiance of the law
  - coal 234
  - metal 225, 228, 236*see also* Unsafe practice
- Dent, Mark 70
- Derbyshire 13, 21, 28, 31, 33, 38, 52, 58, 62, 85, 89, 101, 106, 123, 151, 152, 156, 185
- Dickenson, Inspector Joseph 100–101, 105–6, 123, 154, 185, 224
- disability 7, 24, 31, 95–6
  - support mechanisms 95–6, 141
- discipline
  - coal 120, 190
  - metal 157, 165, 171, 230–33, 247–8

- Dixon, Harold Bailey 193
- Dolcoath mine 199, 202, 204, 209, 213, 216–20, 228–9, 233, 240, 247–8; *see also* Accidents
- hookworm, epidemic 90, 172–3, 178, 180, 198
- dressing floor 63; *see also* Surface labour
- drilling 3
- hand 136, 234
- dry 208, 228–9, 240
- mechanized 162, 170, 173, 196, 202–4, 208, 226, 228–9, 240
- dry *see* changing house
- Duffey, Gavin 222–3
- Duncombe, Thomas Slinsby 69–70, 74–5, 77–80, 82
- Dunn, Inspector Mathias 44, 56, 61, 72, 75, 100–101, 106, 109, 118
- dust 1
- coal
- experiments 184–5, 187, 190, 192–3, 196–7
- explosions 9, 12, 15, 54, 84, 117, 183, 184, 188, 190, 191, 193, 195, 243
- prevention of explosions 198
- regulation and control 125–6, 180, 181, 188, 190, 191–2, 195–7, 211
- see also* pneumoconiosis
- metal
- blasting 162, 165, 202, 204
- dry drilling 162, 166, 173, 202, 204
- miners' phthisis *see* silicosis
- pumping 141
- recognition as health hazard 34–6, 130, 135–7, 139–40, 141, 162, 181, 198–210, 229
- regulation and control 140, 180, 182, 186
- voluntary prophylaxis 136, 199, 208–9
- dynamite *see* high explosives
- education
- coal
- religious 59
- secular 46, 56, 59, 61–2, 66, 112, 114, 158
- technological 43, 48, 56, 100, 121
- metal
- religious 63, 95
- secular 53, 63, 66, 95
- technological 48, 53, 220
- see also* Moral condition
- Elcho, Lord Eighth Earl of Wymess 122
- electrical power
- coal 176, 196
- metal 196
- elitism 89, 91, 215
- emigration (Cornish) 93, 170, 236
- engine house 32
- English, James Henry 40, 43
- Evans, Inspector Thomas 101, 109, 116, 117, 123, 151, 152, 154–5, 157, 163
- experimental research 10, 55, 105, 136, 140, 161, 183–213, 243, 247
- explosions of methane
- coal 7, 9–10, 12, 15, 17, 38–9, 40–5, 53–4, 56, 58, 74–84, 88, 91, 97, 103, 108, 110, 116, 117, 121, 140, 148, 180, 183–99, 208, 210–11, 231, 243–5
- Aberdare 61
- Apedale 188
- Ardsley Main 77
- Brandling Main (Felling) 41, 43
- Camerton 193, 195
- Darley Main 48, 61, 81–2
- Eaglebush 46
- Hartley 74, 125
- Haswell 43–4, 75, 184
- Haydock 102
- Jarrow 43
- Kirklees Hall 79
- Morfa 191
- Nitshill 185
- Oaks 120
- Pontypool 191
- Risca 61
- Seaham 190, 193
- St Hilda's 41, 43
- Talk o' th' Hill 120
- Wallsend 43, 55

- metal 161
  - Ding Dong 33 (n137)
  - Milleclose 33
  - White Founders 33
- see also* timeline
- exposure of conditions 5, 39–40, 45, 56, 60, 65, 163, 182; *see also* Newspapers, Role of
- familial apprenticeship 90
- Faraday, Michael 43–4, 55, 75, 77, 184–5, 244
- Farr, William 131–6
- female labour *see* women's employment
- finance *see* cost book finance
- fire
  - coal 15–6, 29, 33, 190, 196
  - metal 33, 161, 163, 176
- fire damp *see* methane
- fireman 15
- first aid 52, 175, 181, 187
- flood *see* inundations
- Forest of Dean 191
- Forster, Member for Berwick on Tweed 77
- Forster, T. E. 102, 105
- Foster, Inspector Clement Le Neve 151–3, 155–7, 161–3, 166–7, 169, 173–6, 187, 196, 199–200, 215, 225–9, 231–3
- Fowey Consols mine 88
- Foxdale mine 228
- France 41, 61, 80–81, 105, 176, 184
- fraternal organization 85, 87
- Frecheville, Inspector R. J. 152, 226, 230
- Fergusson, James 119
- fuse (safety) 51–2, 54
- Fynes, R 79, 124
- Galloway, Inspector William 123, 154, 184–5, 187, 191
- ganister mining 201, 206
- Garforth, William 197
- Garswood Hall colliery 185
- Gas Workers and General Labourers, National Union of 221
- gases, mine 1, 12, 15–17, 22, 33–4, 42–3, 45–6, 67, 83, 93, 117, 121, 128, 139, 159–62, 165, 181, 185, 190, 195, 199, 202, 209, 243
- gastro-intestinal symptoms 21, 137, 204
- geological conditions 7, 11, 36, 38, 107, 110, 113–14, 135, 144, 157, 171, 243, 248
- Geological Survey, British 152
- geothermal gradient 37, 139
- Germany 41, 176, 198
- government inquiries 44, 64, 77, 80, 128, 140–41, 146, 176, 182, 188, 198, 201, 208–9, 233, 243; *see also* timeline
- coal 8, 44, 54, 55, 61, 75, 77, 82, 103, 109, 119, 131, 143, 180, 184, 187–8, 190, 192–3, 197; *see also* Children's Employment Commission
- metal 127–30, 138, 140, 142, 166, 176, 178–80, 182, 196, 198; *see also* Children's Employment and Kinnaird Commissions
- quarries 175, 200
- Graham, Sir James 75, 77
- Great Laxey mines 173
- Greenhow, Edward 136, 140, 199, 201
- Grenville United mine 217, 220, 229, 239
- Grey, Sir George 8, 72, 77, 79–80, 82–4, 97, 100, 107–9, 111, 119, 120, 128–9
- gunpowder
  - coal 22, 105, 121, 158–9, 193, 195
  - metal 22, 30, 31, 33, 35, 38, 51, 139, 141, 158–9, 162, 204
  - slate 174, 177
  - see also* blasting and high explosives
- Gurney, Goldsworthy 46, 82
- Haldane, J. S. 174, 178–80, 198–9, 201–2, 205–6, 208, 210, 229, 236
- Halkin mine, North Wales 174
- Hall, Henry 123, 155, 185, 187–8, 190, 193–4
- Harton colliery 185
- haulage
  - coal 18, 183, 192–3
  - metal 21, 28, 62, 141, 169, 181, 215

- see also* man haulage, man-engine and ropes
- health (early concerns)  
 coal 20–21, 42 (n22), 56, 58, 105,  
 cetal 14, 22–3, 25, 34–8, 45, 49, 51  
 heavy metals poisoning 37–8, 51, 133, 201  
 Hedley, Inspector John 101, 114, 123, 155,  
 160, 175–6  
 Henwood, George 65–6  
 Hepburn colliery 45  
 heroic acts 95  
 hewing 13, 20, 93  
 high explosives 157, 162, 170, 181, 188,  
 190, 193, 195, 202, 204, 226, 228;  
*see also* blasting and gunpowder  
 Higson, Inspector Peter 101, 118, 123  
 Hodgson, Rev. J. 40–41, 43, 56, 60, 74  
 Home Office 8–9, 62, 69–97, 99, 103,  
 107–9, 111–12, 118–19, 124–6,  
 129, 142, 146, 148, 151, 153, 157,  
 159, 161, 166, 173–5, 177–8, 180,  
 182–3, 187, 192, 196–8, 206, 210,  
 211, 225, 231–2, 245–6  
 Home Secretaries *see under individual names*  
 hospital, miners' 96, 172, 176  
 'hot' air 33  
 humidity 20, 37, 139  
 Hutchinson, J. 208
- illumination 12, 16–17, 93, 172, 187, 211,  
 226; *see also* candles
- inclined plane 227; *see also* haulage and man haulage
- India 172–3
- individualism/independence of metal  
 miners 9, 10, 71–2, 91, 95, 145,  
 213–14, 218, 225, 234, 241
- industrial decline 6, 9, 151, 153, 166,  
 169–71, 198, 218, 249
- inspection districts 100, 102, 108, 123, 154
- inspection  
 statutory  
 coal 2, 8, 43, 55, 60–2, 72, 75–7,  
 79–83, 99, 100, 102, 103, 105,  
 108–9, 117–22, 158 197  
 metal 146, 152, 158–66, 220, 222,  
 224, 229  
 by work force  
 coal 123, 220  
 metal 53, 160, 223–4  
 inspectors, early role of 99  
 inspectors *see under individual names*  
 inundations  
 coal 42, 103  
 metal 32, 93  
 Ireland 63, 123, 154, 166, 167, 224  
 iron mining  
 in conjunction with coal 111, 113  
 health 135, 199  
 lode mining 114, 127, 178  
 regulation 114, 127, 129, 219, 222–3  
 safety 127, 135, 226  
 Isle of Man 151–2, 155, 173, 177, 215, 231
- James, William 209  
 Johnstone, Inspector Hugh 217, 225, 230,  
 233  
 Jude, Martin 69, 75–6  
 juries, role of 39, 61, 79, 159, 191
- Kendall, Nicholas 125, 129–30, 144  
 Killifreth mine 215, 218  
 Kinnaird, Arthur 113, 128, 142, 149  
 Kinnaird Commission 2, 127–49, 173, 175,  
 199, 202, 219, 228  
 Kinnaird, George 8, 10, 129, 142–7, 149,  
 151, 157, 246
- kinship networks 90
- ladder climbs  
 coal 12  
 metal 28, 30, 36, 45, 49, 51, 67, 135,  
 139–40, 162, 172, 199–200, 216,  
 230  
*see also* access/egress and man haulage
- Lancaster, Inspector W. 101, 103  
 Lanescot mine 88  
 Lanyon, Richard R. 23, 36, 51–2, 139  
 Leadhills mine 52, 63, 71  
 Legge, Thomas 201  
 Leifchild, J. R. 19, 45  
 Lemon, Sir Charles 24, 48–9  
 Levant mine 84, 90, 217–20, 229, 233  
 levels, mine 12, 14, 21–2, 26, 28, 30, 34,  
 51, 85, 129, 174, 215, 218

- Lewis, Sir George 111–12, 128  
 Leyner, John George 208  
 lighting *see* illumination  
 London Lead (Quaker) Company 35, 52, 64, 95, 141  
 Longridge, Inspector H. 101  
 Lyell, Charles 43, 44, 75, 184
- MacDonald, Alexander 115, 117–22, 124, 187  
 machismo 95, 234  
 Mackworth, Inspector Herbert 100–101, 105–6, 109–11, 121  
 Magniac, Charles 147–8  
 maintenance, problems of poor 32, 168, 170, 208
- man haulage  
   coal 30, 108, 158  
   metal 27, 29, 140, 148, 158, 162, 168, 220, 221, 223, 227, 230, 239  
   *see also* access/egress and ladders
- man-engine 30, 49–51, 216, 226  
 maps and plans  
   mining 18, 32, 42–3, 45, 48–9, 83–4, 99, 142, 160  
 Marreco, Professor 185  
 Martin, Inspector Joseph 123, 153–4, 160, 165, 167–9, 172–6, 178, 180, 198, 215, 217, 226, 228, 230–33, 237, 239–40, 247  
 masks 136, 208; *see also* dust, early prophylaxis  
 Mather, James 43, 103  
 Mathews, Henry 192  
 mechanical drilling *see* drilling  
 Mechanics Institute 100  
 Medical Inspectorate of Mines 105  
 Medical Officer of Health 96, 162, 201, 228  
 Merionethshire Slate Mines 162, 174–5, 200, 231; *see also* Slate mining)
- methane  
   coal 2, 7, 12, 15–18, 38, 41, 45, 54, 72, 88, 91, 93, 103, 105, 116–17, 140, 163, 171, 183–5, 187–8, 190–93, 195–6, 243  
   metal 13, 33, 60
- Methodism 86–7; *see also* pessimistic religious beliefs  
 Millclose mine 33  
 mineral laws 52; *see also* Barmote Court and Stannaries/Stannary Law  
 Mineral Statistics 152  
 Miners' Association of Great Britain and Ireland 43, 49, 69–74, 82, 115  
 Miners' Mutual Benefit Association 88  
 Miners' National Association 115, 119, 143  
 miners' phthisis *see* silicosis  
   *see also* tuberculosis  
*Mining Journal* 23, 37, 40, 43–4, 46, 52, 61, 65, 103, 109, 113, 139, 165–6  
 Mining Record Office 152  
 Mitchell, James 64  
 Mitchell, William 74–6  
 moral condition 66; *see also* education  
 mortality, rates of occupational 4, 6, 10, 24, 95, 97, 132–3, 206, 209, 243  
   coal 1–2, 4, 13, 24, 53, 58, 100, 105, 135, 149, 164, 177, 186, 210  
   ganister 201  
   metal 1–2, 8–9, 14, 23–5, 44, 53, 55, 73, 127, 131–4, 135, 139–40, 144, 151, 153, 163–4, 166, 182, 199–201, 204–5, 211, 220, 244, 246  
   occupied males 2, 205  
   slate 200  
 Morton, Inspector Charles 100–101, 106, 111, 120–21  
 Murray, John 61
- national efficiency, notions of 10, 198  
 Newcastle upon Tyne Literary and Philosophical Society 42, 56  
 newspapers, role of 39, 40–41, 44, 46, 52, 56, 59, 77, 78–9, 124, 137, 139, 145, 148, 153, 161, 165, 228, 232; *see also* exposure of conditions and *Mining Journal*
- non-fatal injuries 1, 7, 11, 243  
   coal 2, 7, 13, 19–20, 112, 116, 177, 184  
   metal 14, 22, 24, 28–31, 33, 40, 52, 54, 67, 96, 133, 141, 163, 165–6, 168, 175, 177, 204, 228, 239  
   *see also* disabilities

- northeast coalfield 15, 17, 19, 39–40, 46, 54–5, 69, 73, 75, 78, 87, 99, 115, 219–20
- Northumberland and Durham miners 74, 81, 103, 105, 107, 115, 124, 132, 135
- Normansell, John 115, 120
- nystagmus 211
- occupational mortality *see* mortality
- Ogle, William 200
- Oliver, Thomas 202, 206
- ore prices 129, 146, 151, 167, 170, 202, 218, 232
- organized labour, role of *see* unionism
- Palmerston, Viscount 103
- Paris, John 31
- Parliamentary Reports *see* government inquiries and timeline
- Paul, Josiah 239
- Peacock, Thomas 135–6, 139, 199
- Pease, Edward 54–5, 73
- Pennines 13, 21, 26, 31, 35–6, 62, 64, 70, 86, 93, 95–6, 222
- pessimistic religious beliefs 95, 216, 234; *see also* Methodism
- petitions 43, 55, 61, 73–7, 82, 84, 99, 119, 122, 143; *see also* timeline
- philanthropy, role of  
coal 40–49  
metal 49–53
- Phillips, Professor J. 44, 82–4
- phthisis *see* tuberculosis
- piecework contracts 10, 94, 213, 240–41 247; *see also* tribute and tut work
- Pinching, Inspector Archibald 153, 230
- Playfair, Lyon 43, 77
- pneumoconiosis 3, 20–21, 105, 135, 198, 210–11
- poisoning *see* heavy metals poisoning
- post mortem 21, 52, 138, 200, 206
- posture and gait 20, 23, 36, 58–9, 92
- prosecutions 109, 124, 153, 159, 228, 230–31, 231
- protest, pre-industrial 88, 218
- pumping 1, 11, 204  
coal 15  
metal 21, 28, 30, 129, 139, 168
- quarries  
conditions 175, 200, 223  
regulation of 151, 153, 174–5, 180–81, 196, 209–10
- Quick, J. R. 25
- Quiller-Couch, R. 23, 137
- radon 34
- Redruth, in Cornwall 23, 65, 96, 136, 165, 172, 200, 216, 218, 236
- regional variation in risk 3, 7, 36, 38, 116, 134–5, 151, 171, 243, 246
- Registrar General 3, 24, 131, 200, 206, 236
- religion *see* Methodism and pessimistic religious beliefs
- rescue attempts 42, 44, 79, 95, 120, 163, 176, 197, 208
- rescue brigades 177, 181
- respirators 206–7; *see also* breathing apparatus
- responsibility for health and safety 2, 16, 46, 57, 78, 83, 88, 111, 117–19, 122, 153, 156, 160, 213, 225, 230, 233, 247–8
- rheumatism 20 51 229; *see also* beat diseases
- risk taking *see* unsafe practice
- Ritchie, Dr. 206
- rock removal, early methods 13, 52
- Roberts, W. P. 43, 54, 69, 72, 75
- Robertshaw, Dr., Medical Officer of Health for Stockbridge 201
- Robson, Inspector J. 123, 154, 191
- ropes  
coal 18, 75, 158  
metal 26, 74, 161, 168  
*see also* haulage
- Royal Commissions *see* government inquiries and ‘Kinnaird Commission’
- Royal Institute 184
- Royal Society 183–4, 186
- Ryan, James 74–5

- safety lamp 16–7, 24, 33, 55, 73, 185, 189, 190, 191, 204, 244; *see also* Upton and Roberts
- St John's Ambulance Association 175
- Scotland 18, 52, 69, 82, 101, 106, 120, 123, 154, 184–5, 214
- Scottish Miners' Association 115
- self acting ventilator 46
- shaft(s) 14
- coal, including security 12, 14, 16, 18–19, 41, 57, 105–6, 108, 111, 125, 148, 193
  - abandoned, problems of 108, 156
  - metal, including security 21–2, 28, 30, 33, 85, 93, 134, 142, 148, 156–7, 161, 169, 220, 221, 232
  - abandoned, problems of 142, 145, 153, 156, 159
- shift boss (metal mining) 232–3
- silicosis 34–5, 84, 89, 127, 130, 136–8, 151, 163, 182, 199, 205–6, 210, 216, 228–9, 240; *see also* Tuberculosis
- Simon, Sir John 136, 201
- Smethurst, William 185
- Snailbeach mine 36, 95, 144, 168, 215; *see also* accidents
- Sopwith, Thomas 42, 56, 110
- South Africa 172, 198, 209, 216; *see also* Boer War
- South Condurrow mine 215
- South Crofty mine 239
- Southern, Inspector G. 101, 123
- South Frances mine 218
- South Shields Committee 43–4, 48, 60–61, 75–6, 82, 99; *see also* timeline
- South Tamar Valley mine 93; *see also* accidents
- special rules 108, 110, 118–19, 121, 135, 157, 159–62, 175–6, 180–82, 195–6, 211, 223, 225–6, 228–31, 248
- Stannaries/Stannary law 89, 146, 216, 218; *see also* mineral laws
- State Advisory Council on Tuberculosis 210
- steam power, application of 1
- coal 14, 18, 46, 158
  - metal 21, 22, 32, 51, 108, 158
- Stephenson, George 46 (n49), 56
- 'sub-culture of danger' 91
- suffocation
- coal 12, 58, 105–6, 125
  - metal 161, 173
- sulphur dioxide 22
- Sunderland Society 41, 43, 45, 74; *see also* timeline
- surface labour, conditions of
- coal 13, 18, 105, 119–20, 191
  - regulation of 153, 158
  - metal 26, 32, 37, 44, 63, 65, 90, 161, 166–8, 179, 196, 218, 227, 247
  - regulation of 153, 158, 177, 202
  - see also* women's employment and child labour
- surgeon, mine 35, 52, 96, 107, 120, 136, 138
- miners' grievances 147, 215
  - 'suspensory girdle' 49
- Swallow, David 72
- Sykes, John 40, 55, 73, 75
- tags, safety 84, 90
- Talacre mine 169
- Taylor, John 44, 48, 51, 54, 70
- temperature (underground) 12, 37, 107, 139–40, 173, 178, 181, 185, 199, 200, 204
- Thomas, Arthur 172, 178, 180, 198, 209, 219–20, 229, 236, 240, 247–8
- Thomas, Josiah 216, 217
- Thomas, William 42, 56
- Tincroft mine 202, 217, 220, 229, 234
- traditional working practice (metal) 6, 53, 71, 89–90, 94, 145, 213–14, 218, 225, 234, 247
- Tremenheere, Hugh Seymour 46, 60–62, 66, 72, 76, 80–82, 112, 129; *see also* Timeline
- tribute 85, 213, 217–18, 220, 233, 240–41
- truck 76–7, 120, 153
- tuberculosis, classical 2, 33, 136–8, 199, 201, 205–6, 210; *see also* phthisis
- tut work 85, 217
- Tyndall, John 199

- unionism
  - coal 10, 54, 69–84, 108, 114–26
  - metal 218–19
    - absence of 84–8, 214–18
  - see also* individualism
- unsafe practice
  - coal 61, 20, 105
  - metal 88, 90, 102, 113, 167, 171, 220, 225, 228, 236–40
  - see also* defiance of the law
- Upton and Roberts safety lamp 54, 73
- ventilation
  - coal 12, 15–16, 43–6, 48, 52–4, 57, 60–62, 67, 72, 75–7, 81–2, 84, 102–3, 105, 108, 110, 116–17, 121–2, 125, 140, 159, 183, 185, 187, 190, 197, 211, 231, 243, 246
  - metal 21, 34–5, 51–2, 55, 93, 135, 139–41, 146, 148, 161–2, 166, 171–4, 176, 181, 202, 206, 219–20, 222, 224–5
- Verner, Inspector A. 101
- Vickers gun range 197
- voluntary health and safety provisions 7, 40, 45, 49, 52–5, 67, 73, 91, 104, 175, 224
- Wakley, Thomas 78
- Wales 15, 17, 21–2, 46, 55, 63–4, 70, 79, 82, 87, 101, 106, 116, 118, 123, 131, 134–5, 141–2, 151–2, 154, 156, 160, 167, 169, 171, 174, 184, 188, 192, 205, 211, 215, 219–20, 223, 231, 236
- Wales, Inspector Thomas 101, 118, 123, 154, 185
- Wallsend colliery 16, 43, 45, 184; *see also* accidents and timeline
- Wanlockhead mine 64, 66, 71
- Wardell, Inspector Frank 101, 123, 154, 175, 185, 200
- Warrington-Smyth, J. 44, 62, 81, 109
- water power, application of 14, 21, 134
- West Bassett mine 218
- West Cumberland Miners' Union 222
- Westphalia coalfield 176, 179
- Wheal Busy mine 219
- Wheal Henrietta mine 139
- Wheal Uny mine 96, 168
- white damp *see* carbon dioxide
- White Founders mine 33
- White Grit mine 36
- Williams, Inspector R. 101, 229
- Willis, Inspector J. 101, 123, 155, 157
- winding 1, 11, 14, 60, 67, 108, 161, 169, 204
- women's employment
  - coal 4–5, 7, 40, 56–8, 60, 65, 69, 78, 191, 244
  - metal 4–5, 40, 62–3, 65, 129
  - see also* Bâl maiden
- Wood, Lindsey 185
- Wood, Nicholas 81, 107, 110
- Woolwich Arsenal 190, 193, 196
- workers' compensation 3, 124, 130, 209, 216
- worm, miners *see* hookworm
- Wynne, Inspector T. 101, 103, 111, 120, 123, 154, 185, 188
- x-ray, in diagnosis 138
- Yorkshire Miners' Association 115