

- HS14. "Hydrogenation Catalysts," E. C. Williams and S. H. McAllister, (assigned to Shell Development Co.), U.S. 2,067,368 (1937) January 12.
- HS15. "Hydrogen," N. F. Kubicek, (assigned to Shell Development Co.), U.S. 2,465,235 (1949) March 22.
- HS16. "Hydrocarbon-Oxygen Mixtures," P. H. Deming, (assigned to Shell Development Co.), U.S. 2,519,955 (1950) August 22.
- HS17. "Gas Generator for Producing Controlled Atmospheres in a Two-Stage Exothermic Partial Combustion of a Gaseous Hydrocarbon," Y. Toussaint, (assigned to Shell Development Co.), U.S. 2,924,577 (1960) February 9.
- HS18. "Hydrogen," (assigned to Shell Internationale Research Maatschappij N. V.), Belg. 648,528 (1964) November 30.
- HS19. "Catalytic Reforming of Hydrocarbons," (assigned to Shell Internationale Research Maatschappij N. V.), Neth. Appl. 6,55I,5II (1965) October 25.
- HS20. "Preparation of Hydrogen or Hydrogen-Containing Gases," (assigned to Shell Internationale Research Maatschappij N. V.), Neth. Appl. 6,404,815 (1965) November 1.
- HS21. "Mixtures of Hydrogen and Carbon Monoxide," (assigned to Shell Internationale Research Maatschappij N. V.), Neth. Appl. 6,506,075 (1965) November 15.
- HS22. "Hydrogen or Hydrogen-Containing Gas Mixtures From Hydrocarbons," (assigned to Shell Internationale Research Maatschappij N. V.), Brit. 1,011,696 (1965) December 1.
- HS23. "Hydrogen-Carbon Monoxide Mixtures From Liquid Hydrocarbons," L. W. ter Haar and E. F. Reinmuth, (assigned to Shell Internationale Research Maatschappij N. V.), Brit. 1,059,688 (1967) February 22.
- HS24. "Manufacture of Hydrogen in Impure State," (assigned to Shell Internationale Research Maatschappij N. V.), Neth. Appl. 6,511,884 (1967) March 14.
- HS25. "Combustible Hydrogen-Carbon Oxide Mixtures," (assigned to Shell Internationale Research Maatschappij N. V.), Fr. 1,480,855 (1967) May 12.
- HS26. "Preparation of Hydrogen or Hydrogen-Containing Gas Mixtures," (assigned to Shell Internationale Research Maatschappij N. V.), Neth. Appl. 6,603,48I (1967) September 18.
- HS27. "Catalytic Steam Conversion of Hydrocarbons," (assigned to Shell Internationale Research Maatschappij N. V.), Neth. Appl. 66 T6, T79 (1968) May 20.

- HS28. "Preparation of Gases Containing Hydrogen and Carbon Monoxide," (assigned to Shell Internationale Research Maatschappij N. V.), Neth. Appl. 66 17, 835 (1968) June 21.
- HS29. "Producing Purified Hydrogen," D. W. Miller and K. E. Zarker, (assigned to Shell Internationale Research Maatschappij N. V.), S. African 69 05, 183 (1970) February 4.
- HS30. "Apparatus for Producing Hydrogen-Carbon Monoxide Gas Mixtures," L. W. Ter Haar, (assigned to Shell Internationale Research Maatschappij N. V.), Ger. Offen 2, 102, 368 (1971) August 5.
- HS31. "Apparatus and Method for Generating Gases Containing Carbon Monoxide and Hydrogen," (assigned to Shell Internationale Research Maatschappij N. V.), Neth. Appl. 71 08, 156 (1972) December 18.
- HS32. "Partial Oxidation of a Fuel in a Reactor Operating at Relatively Low Pressure," L. W. Ter Haar, (assigned to Shell Internationale Research Maatschappij N. V.), Ger. Offen. 2, 231, 669 (1973) January 18.
- HS33. "Generating Hydrogen-Rich Gases," N. C. Van Lookeren, J. E. Naber, F. J. Zuiderweg and W. P. M. Van Swaaij, (assigned to Shell Internationale Research Maatschappij N. V.), Ger. Offen. 2, 257, 733 (1973) May 30.
- HS34. "Preparation of Synthesis Gas From Hydrocarbons," S. Morida, H. Danuchi, T. Sasaki and K. Kazuki, (assigned to Shinnippon Seitetsu Kagaku Kogyo Co., Ltd.), Japan 71 01, 561 (1971) January 14.
- HS35. "Hydrogen," F. Siegwart, Swiss 180, 683 (1936) February 1.
- HS36. "Apparatus for Producing Oxygen or Hydrogen Gas Fed to a Fuel Cell," (assigned to Siemens A. -G.), Brit. 1, 214, 195 (1970) December 2.
- HS37. "Hydrogen by Incomplete Flameless Catalytic Combustion of Hydrogen Oils," C. Koch, (assigned to Siemens A. -G.), Ger. Offen. 1, 964, 810 (1971) July 15.
- HS38. "Electrical Treatment of Hydrocarbons and Fatty Oils," (assigned to Siemens and Halske A. -G.), Fr. 466, 813 (1923) August 5.
- HS39. "Reforming With Optimization of Hydrogen Production," M. H. Dalson and W. H. Decker, (assigned to Sinclair Research, Inc.), U. S. 3, 258, 420 (1966) June 28.
- HS40. "Removal of Hydrogen From the Effluent Stream of a Vacuum Dehydrogenation Unit," G. O. Michaels, (assigned to Sinclair Research, Inc.), U. S. 3, 448, 162 (1969) June 3.

- HS41. "Hydrogen," (assigned to Soc. Anon. Des Ateliers Generaux De Construction), Belg. 376,567 (1931) February 28.
- HS42. "Hot Reducing Gas," (assigned to Societe Anon. Distrigaz N. V. Centre National de Recherches Metallurgiques), Belg. 781,613 (1972) July 17.
- HS43. "Extinguishing Furnaces for the Partial Combustion of Hydrocarbons," F. F. A. Braconier and J. J. L. E. Riga, (assigned to Societe Belge de l Azote et des Produits Chimiques du Marly, S. A.), U.S. 3,057,707 (1962) October 9.
- HS44. "Partial Combustion Apparatus for Furnaces for Pyrolysis of Hydrocarbons," F. F. A. Braconier and J. J. L. E. Riga, (assigned to Societe Belge de l Azote et des Produits Chimiques du Marly, S. A.), U.S. 3,121,616 (1964) February 18.
- HS45. "Hydrogen From Hydrocarbons," M. Jean and A. Devaux, (assigned to Societe Chimique de la Grande Paroisse), Fr. 966,393 (1950) October 9.
- HS46. "Preparation of Hydrogen-Carbon Monoxide Mixtures by Hydrocarbon Oxidation," M. Jean, (assigned to Societe Chimique de la Grande Paroisse), Fr. 1,143,814 (1957) October 4.
- HS47. "Apparatus for Manufacture of Gases High in Hydrogen From Hydrocarbons," M. Jean, (assigned to Societe Chimique de la Grande Paroisse), Fr. 1,238,209 (1960) July 4.
- HS48. "Hydrogen-Carbon Monoxide Mixtures," M. Jean and J. Lelong, (assigned to Societe Chimique de la Grande Paroisse), Fr. 1,309,804 (1962) November 23.
- HS49. "Production of Mixtures of Hydrogen and Carbon Monoxide From Hydrocarbons," J. Maral, (assigned to Societe Chimique de la Grande Paroisse), Fr. 1,410,951 (1965) August 9.
- HS50. "Energy Recovery From the Production of Gases Rich in Hydrogen and Their Subsequent Reaction," J. Gignier, J. Quibel and J. Guyard, (assigned to Societe Chimique de la Grande Paroisse), Fr. 1,419,753 (1965) December 3.
- HS51. "Petroleum Cracking," (assigned to Societe Chimique de la Grande Paroisse), Belg. 669,645 (1966) March 15.
- HS52. "High-Pressure Reforming of Hydrocarbons," J. Gignier, P. Lhonore, J. Quibel and M. Senes, (assigned to Societe Chimique de la Grande Paroisse), Fr. 1,492,926 (1967) August 25.
- HS53. "Reforming of Heavy Hydrocarbons," P. Lhonore, J. Quibel and M. Senes, (assigned to Societe Chimique de la Grande Paroisse), Fr. 1,543,423 (1968) October 25.

- HS54. "Recovery of Hydrogen, " (assigned to Societe d' Electro-Chemie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine), U.S. 1,438,383 (1966) May 13.
- HS55. "Phosphorus, Phosphore Acid, " E. Voituron, (assigned to Soc. d' etudes Scientifiques et d' entreprises industrielles), Brit. 346,038 (1929) January 9.
- HS56. "Reduction of Metallic Ores by Mixtures of Hydrogen and Carbon Monoxide Obtained From Hydrocarbons, " A. Scortecci, (assigned to Societa Finanziaria Siderurgica Finsider per Azioni), Ital. 495,827 (1954) June 25.
- HS57. "Carbon Monoxide and Hydrogen, " (assigned to S. I. R. I. Societa Italiana Ricerche Industriali), Fr. 755,493 (1933) November 25.
- HS58. "Electric Arc Treatment of Liquid Hydrocarbons, " (assigned to Soc. L'Air Liquide Soc. Anon. Pour L' Etude Et L' Exploitation des Procedes Georges Claude), Fr. 672,912 (1929) April 10.
- HS59. "Low-Temperature Apparatus for Making Hydrogen, " (assigned to Societe L' Air Liquide Soc. Anon. Pour L' Etude Et L' Exploitation Des Procedes G. Claude) Fr. 718,772 (1931) June 17.
- HS60. "Electric Arc Treatment of Liquid Hydrocarbons, " Y. Mercier, (assigned to Societe L' Air Liquide Soc. Anon. Pour L' Etude and L' Exploitation Des Procedes Georges Claude), U.S. 1,830,615 (1932) November 3.
- HS61. "Acetylene-Ethylene Mixtures by Electrolysis of Hydrocarbons, " A. Vialaron, (assigned to Societe Des Produits Azotes), Fr. 1,296,664 (1962) June 22.
- HS62. "Catalyst for the Conversion of Hydrocarbons, " J. Maziuk, (assigned to Socony Mobil Oil Co., Inc.), Fr. 1,350,947 (1964) January 31.
- HS63. "Carbon Monoxide and Hydrogen From Methane, " A. J. Abrams, M. H. Gorin and C. O. Baker, (assigned to Socony-Vacuum Oil Co., Inc.), U.S. 2,449,359 (1948) September 14.
- HS64. "Synthesis Gas, " M. H. Gorin and A. J. Abrams, (assigned to Socony-Vacuum Oil Co., Inc.), U.S. 2,485,875 (1949) October 25.
- HS65. "High-Temperature Hydrocarbon Conversion, " L. P. Evans, (assigned to Socony-Vacuum Oil Co., Inc.), U.S. 2,543,742 (1951) February 27.
- HS66. "High-Temperature Hydrocarbon Conversion, " L. P. Evans, (assigned to Socony-Vacuum Oil Co., Ltd.), U.S. 2,543,743 (1951) February 27.

- HS67. "Electrochemical Conversion of Hydrocarbons," C. H. Schlesman, (assigned to Socony-Vacuum Oil Co., Inc.), U.S. 2,553,944 (1951) May 22.
- HS68. "Hydrocarbon Compound," E. B. Spear, Can. 264,324 (1926) September 14.
- HS69. "Hydrogen or Ammonia Synthesis Gas," A. M. Squires, U.S. 3,397,962 (1968) August 20.
- HS70. "Gasification of Oil Residues," C. E. Hemminger, (assigned to Standard Catalytic Co.); U.S. 2,346,754 (1944) April 18.
- HS71. "Hydrogen," E. V. Murphree, C. W. Tyson, D. L. Campbell and H. Z. Martin, (assigned to Standard Catalytic Co.), U.S. 2,425,754 (1947) August 19.
- HS72. "Hydrogen," G. H. Freyermuth, J. K. Small and Wm. V. Hanks, (assigned to Standard-I. G. Co.), Brit. 364,419 (1930) March 7.
- HS73. "Hydrogen," Wm. V. Hanks and G. H. Freyermuth, (assigned to Standard-I. G. Co.), Brit. 366,360 (1930) May 31.
- HS74. "Hydrogen," Wm. V. Hanks and J. K. Small, (assigned to Standard -I. G. Co.), Brit. 366,369 (1930) May 13.
- HS75. "Hydrogen," (assigned to Standard-I. G. Co.), Fr. 711,813 (1931) February 23.
- HS76. "Hydrogen," (assigned to Standard-I. G. Co.), Fr. 715,792 (1931) April 21.
- HS77. "Hydrogen Production From Hydrocarbons," J. K. Small, (assigned to Standard-I. G. Co.), U.S. 2,084,511 (1937) June 22.
- HS78. "Catalysts Suitable for Use in Producing Hydrogen From Methane and Steam," W. E. Spicer, (assigned to Standard-I. G. Co.), U.S. 2,209,492 (1941) July 30.
- HS79. "Hydrogen From Hydrocarbon Gases," G. H. Freyermuth, (assigned to Standard Oil Development Co.), U.S. 1,904,439 (1933) April 18.
- HS80. "Hydrogen From Hydrocarbon Gases," Wm. V. Hanks and G. H. Freyermuth, (assigned to Standard Oil Development Co.), U.S. 1,915,363 (1933) June 27.
- HS81. "Gas Rich in Free Hydrogen From Hydrocarbon Gases," Wm. V. Hanks and J. K. Small, (assigned to Standard Oil Development Co.), U.S. 1,915,362 (1933) June 27.

- HS82. "Hydrogen From Gaseous Hydrocarbons," (assigned to Standard Oil Development Co.), Ger. 592,934 (1934) February 19.
- HS83. "Hydrogen Production Suitable for Use in Connection With Oil Hydrogenation," R. T. Haslam, (assigned to Standard Oil Development Co.), U.S. 1,955,290 (1934) April 17.
- HS84. "Converting Organic Sulfur Compounds Such as Those in Oil-Cracking Gases Into Hydrogen Sulfide," E. Lieber and R. Rosen, (assigned to Standard Oil Development Co.), U.S. 1,976,806 (1934) October 16.
- HS85. "Hydrogen From Steam and Hydrocarbons," G. H. Freyermuth, (assigned to Standard Oil Development Co.), U.S. 1,970,695 (1934) August 21.
- HS86. "Hydrogen," (assigned to Standard Oil Development Co.), Fr. 771,792 (1934) October 16.
- HS87. "Gas Rich in Free Hydrogen," W. C. Asbury, (assigned to Standard Oil Development Co.), U.S. 1,934,029 (1934) November 7.
- HS88. "Catalyst for Producing Hydrogen From Hydrocarbons and Steam," Wm. E. Spicer and G. H. B. Davis, (assigned to Standard Oil Development Co.), U.S. 2,135,058 (1939) November 1.
- HS89. "Catalyst for Hydrogen Production From Steam and Hydrocarbons Such as Methane," A. Voorhies, Jr., (assigned to Standard Oil Development Co.), U.S. 2,229,199 (1941) January 21.
- HS90. "Hydrogen-Containing Gases," (assigned to Standard Oil Development Co.), Brit. 616,710 (1949) January 26.
- HS91. "Hydrogen and Acetylene," (assigned to Standard Oil Development Co.), Fr. 942,803 (1949) February 18.
- HS92. "Apparatus for Contact Reactions of Fluidized Solids With Gases," E. J. Gohr and C. W. Tyson, (assigned to Standard Oil Development Co.), U.S. 2,470,395 (1949) May 17.
- HS93. "Synthesis Gas," B. G. Gillespie, (assigned to Standard Oil Development Co.), U.S. 2,496,342 (1950) February 7.
- HS94. "Mixtures of Carbon Monoxide and Hydrogen," (assigned to Standard Oil Development Co.), Brit. 634,933 (1950) March 29.
- HS95. "Carbon Monoxide and Hydrogen," (assigned to Standard Oil Development Co.), Brit. 636,206 (1950) April 26.
- HS96. "Industrial Mixtures of Carbon Monoxide and Hydrogen," (assigned to Standard Oil Development Co.), Brit. 635,909 (1950) April 19.

- HS97. "Synthesis-Gas Mixtures Containing Carbon Monoxide and Hydrogen," (assigned to Standard Oil Development Co.), Brit. 635,913 (1950) April 19.
- HS98. "Oxygen Carrier for the Oxidation of Gaseous Hydrocarbons," E. S. Corner, R. V. J. McGee and C. S. Lynch, (assigned to Standard Oil Development Co.), U.S. 2,507,502 (1950) May 16.
- HS99. "Synthesis Gas," W. M. Smith, (assigned to Standard Oil Development Co.), U.S. 2,522,468 (1950) September 12.
- HS100. "Gases for the Synthesis of Hydrocarbons," (assigned to Standard Oil Development Co.), Brit. 641,945 (1950) August 23.
- HS101. "Producing a Carbon Monoxide and Hydrogen Gas Mixture From Carbonaceous Materials," W. F. Rollman, (assigned to Standard Oil Development Co.), U.S. 2,527,197-8 (1950) October 24.
- HS102. "Making Commercial Mixtures of Hydrogen and Carbon Monoxide," C. S. Lynch, T. B. Wasserbach and W. R. F. Guyer, (assigned to Standard Oil Development Co.), U.S. 2,541,657 (1951) February 13.
- HS103. "Hydrogen," W. C. Scharmann, (assigned to Standard Oil Development Co.), U.S. 2,565,395 (1951) August 21.
- HS104. "Handling Fuels," B. F. Roetheli, (assigned to Standard Oil Development Co.), U.S. 2,579,397 (1951) December 18.
- HS105. "Catalytic-Reforming Process," C. L. Carpenter, (assigned to Standard Oil Development Co.), U.S. 2,585,737 (1952) February 12.
- HS106. "Carbon Monoxide and Hydrogen From Methane," (assigned to Standard Oil Development Co.), Brit. 657,585 (1952)
- HS107. "Oxidation Carrier," C. S. Lynch and E. S. Corner, (assigned to Standard Oil Development Co.), U.S. 2,588,260 (1952) March 4.
- HS108. "Gas Mixtures Containing Carbon Monoxide and Hydrogen," F. T. Barr and H. Z. Martin, (assigned to Standard Oil Development Co.), U.S. 2,592,377 (1952) April 8.
- HS109. "Use of a Magnesia Catalyst in the Production of Synthesis Gas (Hydrogen and Carbon Monoxide) From Methane and Carbon Dioxide," C. S. Lynch, (assigned to Standard Oil Development Co.), U.S. 2,593,584 (1952) April 22.
- HS110. "Gaseous Fuel," C. E. Hemminger, (assigned to Standard Oil Development Co.), U.S. 2,605,178 (1952) July 29.

- HS111. "Water Gas," E. S. Corner, R. V. J. McGee and C. S. Lynch, (assigned to Standard Oil Development Co.), U.S. 2, 607, 668 (1952) August 19.
- HS112. "Synthesis Gas," W. K. Lewis, Jr., (assigned to Standard Oil Development Co.), U.S. 2, 607, 670 (1952) August 19.
- HS113. "Production of a Synthesis or Fuel Gas and Preparation of a Catalyst From Coke or Coal," S. B. Sweetser, (assigned to Standard Oil Development Co.), U.S. 2, 619, 449 (1952) November 25.
- HS114. "Catalytic Reactor For Producing Synthesis Gas," H. Z. Martin, (assigned to Standard Oil Development Co.), U.S. 2, 622, 970 (1952) December 23.
- HS115. "Gasification of Carbonaceous Solids," E. J. Gornowski and K. J. Nelson, (assigned to Standard Oil Development Co.), U.S. 2, 633, 416 (1953) March 31.
- HS116. "Hydrocarbon Synthesis Gas," H. Z. Martin, (assigned to Standard Oil Development Co.), U.S. 2, 662, 912 (1953) December 15.
- HS117. "Industrial Hydrogen and Carbon Monoxide Mixtures," W. K. Lewis and E. R. Gilliland, (assigned to Standard Oil Development Co.), U.S. 2, 671, 719 (1954) March 9.
- HS118. "Hydrocarbon Synthesis Gas," W. K. Lewis and E. R. Gilliland, (assigned to Standard Oil Development Co.), U.S. 2, 671, 719 (1954) March 9.
- HS119. "Synthesis Gas," B. E. Bailey, (assigned to Standard Oil Development Co.), U.S. 2, 676, 156 (1954) April 20.
- HS120. "Gas Mixtures Containing Carbon Monoxide and Hydrogen," E. S. Corner, (assigned to Standard Oil Development Co.), U.S. 2, 678, 264 (1954) May 11.
- HS121. "Combustible Gas," Wm. W. Odell, (assigned to Standard Oil Development Co.), U.S. 2, 681, 273 (1954) June 15.
- HS122. "Synthesis Gas From Gaseous Hydrocarbons," H. Z. Martin, (assigned to Standard Oil Development Co.), U.S. 2, 692, 192 (1954) October 19.
- HS123. "Synthesizing Hydrocarbons," R. C. Guinness, (assigned to Standard Oil Co. of Illinois), U.S. 2, 347, 682 (1944) May 2.
- HS124. "Hydrogen Production Under High Pressure," V. Voorhees, (assigned to Standard Oil Co. of Ind.), U.S. 1, 904, 908 (1933) April 18.

- HS125. "Producing Hydrogen-Carbon Monoxide Mixtures," E. A. Johnson, (assigned to Standard Oil Co. of Indiana), U.S. 2,482,187 (1949) September 20.
- HS126. "Synthesis Gas From Natural Gas," F. L. Symonds, (assigned to Standard Oil Co. of Indiana), U.S. 2,631,094 (1953) March 10.
- HS127. "Catalytic Cracking of Reduced Crude Oils," K. W. McHenry, H. S. Seeling H. M. Brennan and R. W. Carl, (assigned to Standard Oil Co. of Indiana), U.S. 2,998,380 (1959) Appl. February 27.
- HS128. "Process for Purifying Hydrogen and Preparing Carbonyl Sulfide," E. A. Swakon, (assigned to Standard Oil Co. of Indiana), U.S. 3,382,043 (1968) May 7.
- HS129. "Oxygenated Compounds and Liquid Hydrocarbons From Hydrocarbon Gas," M. F. Vesta and J. A. Phinney, (assigned to Standard Oil and Gas Co.), U.S. 2,482,284 (1949) September 20.
- HS130. "Carbon Monoxide and Hydrogen," J. A. Phinney, (assigned to Standard Oil and Gas Co.), U.S. 2,482,866 (1949) September 27.
- HS131. "Hydrogen-Carbon Monoxide Synthesis," J. A. Phinney, B. S. Pace and G. R. Ayton, (assigned to Stanolind Oil and Gas Co.), U.S. 2,527,846 (1950) October 31.
- HS132. "Synthesis Gases," E. H. Reichl, (assigned to Stanolind Oil and Gas Co.), U.S. 2,529,630 (1950) November 14.
- HS133. "Method and Apparatus for Making Hydrogen-Carbon Monoxide Mixtures," J. A. Phinney, (assigned to Stanolind Oil and Gas Co.), U.S. 2,532,514 (1950) December 5.
- HS134. "Production of a Synthesis or Fuel Gas and Preparation of a Catalyst From Coke or Coal," S. B. Sweetser, (assigned to Standard Oil Development Co.), U.S. 2,619,449 (1952) November 25.
- HS135. "Ammonia Synthesis Gas," V. Stark, U.S. 2,714,060 (1955) July 26.
- HS136. "Hydrogen-Nitrogen Mixture by Thermal Decomposition of Ammonia," W. A. Backlund, (assigned to Stockholms Superfosfat Fabriks A/B), Swed. 157,917 (1957) February 26.
- HS137. "Hydrogen Production," A. R. Stryker, U.S. 2,200,607 (1940) May 14.
- HS138. "Apparatus for Hydrogen Production," A. R. Stryker, U.S. 2,268,910 (1942) January 6.

- HS139. "Wave Reactor," W. B. Hansel, (assigned to Sun Oil Co.), U. S. 3, 272, 598 (1966) September 13.
- HS140. "High-Pressure Hydrogen Production," R. A. Baillie, (assigned to Sun Oil Co.), U. S. 3, 514, 260 (1970) May 26.
- HS141. "Shock Wave Reactor," J. L. Lauer, (assigned to Sun Research and Development Co.), U. S. 3, 739, 063 (1973) June 12.
- HS142. "Conversion of Methane," (assigned to Regie Nationale des Usines Renault), Fr. 1, 272, 004 (1962) January 12.
- HS143. "Supplement Gas," E. G. De Coriolis, (assigned to Surface Combustion Corp.), U. S. 2, 671, 718 (1954) March 9.
- HS144. "Pyrolysis of Hydrocarbons," M. P. Sweeney, U. S. 3, 094, 479 (1963) June 18.
- HS145. "Hydrogen and Nitrogen for Ammonia Synthesis," E. Szarvasy, U. S. 1, 417, 952 (1922) May 30.
- HT1. "A Gaseous Mixture Containing Hydrogen, Carbon Monoxide and Nitrogen From Natural Gas Containing Methane," T. Ogura and H. Nagai, (assigned to Taiwan Hatumei Kyokai), Japan 134, 216 (1940) January 16.
- HT2. "Carbon Monoxide and Hydrogen Production From Fossil Fuels," R. M. Dille, R. W. Chapman and J. C. Ahlborn, (assigned to Texaco Inc.), U. S. 2, 999, 741 (1958) Appl. May 29.
- HT3. "Hydrocarbon Conversion to Carbon Monoxide and Hydrogen," L. A. Clarke, C. G. Ludeman and H. V. Atwell, (assigned to Texaco Inc.), U. S. 3, 010, 813 (1959) Appl. February 13.
- HT4. "Production of Carbon Monoxide and Hydrogen From Hydrocarbons," D. B. Eastman, (assigned to Texaco Inc.), U. S. 2, 892, 693 (1959) June 30.
- HT5. "Carbon Black Manufacture From Liquid Hydrocarbons," D. Eastman, (assigned to Texaco Inc.), U. S. 2, 914, 418 (1959) November 24.
- HT6. "Apparatus for Gasification of Caking-Type Coal," D. Eastman, (assigned to Texaco Inc.), U. S. 2, 931, 715 (1960) April 5.
- HT7. "Temperature Measurement in High-Pressure Reactors for Generation of Carbon Monoxide and Hydrogen From Hydrocarbons," D. Eastman, (assigned to Texaco Inc.), U. S. 2, 963, 353 (1960) December 6.
- HT8. "Generation of Carbon Monoxide and Hydrogen From Liquid Hydrocarbons," D. Eastman, (assigned to Texaco Inc.), U. S. 2, 976, 135 (1961) March 21.

- HT9. "Production of Carbon Black, Carbon Monoxide, and Hydrogen From Fossil Fuels," R. W. Chapman, J. C. Ahlborn and R. M. Dille, (assigned to Texaco Inc.), U.S. 2,987,386 (1961) June 6.
- HT10. "Synthesis Gas," H. V. Atwell, (assigned to Texaco Inc.), U.S. 2,992,907 (1961) July 18.
- HT11. "Oxidative Cracking of Hydrocarbons," F. E. Guptill, Jr., (assigned to Texaco Inc.), U.S. 3,097,082 (1963) July 9.
- HT12. "Synthesis Gas Generation," F. E. Guptill, Jr. and W. L. Slater, (assigned to Texaco Inc.), U.S. 3,232,727 (1966) February 1.
- HT13. "Steam-Reforming Hydrocarbons over Iron-Chromium Catalyst for Synthesis Gas Production," H. V. Hess and F. E. Guptill, Jr., (assigned to Texaco Inc.), U.S. 3,485,882 (1969) December 23.
- HT14. "Conversion of Liquid Hydrocarbons to Synthesis Gas," W. L. Slater, (assigned to Texaco Inc.), U.S. 3,520,823 (1970) July 21.
- HT15. "Synthesis Gas and Hydrogen From Liquid Hydrocarbons," W. G. Schlinger, W. L. Slater and R. M. Dille, (assigned to Texaco Inc.), U.S. 3,545,926 (1970) December 8.
- HT16. "Hydrogen Recovery From Refinery Gases," R. F. Wilson, R. A. Peck and F. E. Guptill, Jr., (assigned to Texaco Inc.), U.S. 3,575,690 (1971) April 20.
- HT17. "Heat Exchanger for a Catalytic System," J. R. Muenger, (assigned to Texaco Inc.), U.S. 3,666,423 (1972) May 30.
- HT18. "Gas Mixtures," R. J. Ruble, (assigned to Texaco Development Corp.), U.S. 2,484,249 (1949) October 11.
- HT19. "Synthesis Gas," A. D. Garrison, (assigned to Texaco Development Corp.), U.S. 2,516,973 (1950) August 1.
- HT20. "Gasification of Carbonaceous Fuel," A. D. Garrison, (assigned to Texaco Development Corp.), U.S. 2,516,974 (1950) August 1.
- HT21. "Synthesis Gas Containing Hydrogen," (assigned to Texaco Development Corp.), Brit. 649,645 (1951) January 31.
- HT22. "Synthesis Gas," A. D. Garrison, (assigned to Texaco Development Corp.), U.S. 2,566,936 (1951) September 4.
- HT23. "Synthesis Gas," (assigned to Texaco Development Corp.), Brit. 672,165 (1952) May 14.
- HT24. "Carbon Monoxide and Hydrogen Synthesis Products," H. V. Hess, G. B. Arnold and M. L. Drabkin, (assigned to Texaco Development Corp.), Brit. 676,710 (1952) July 30.

- HT25. "Reactor for Preparation of Hydrogen and Carbon Monoxide Gas Mixtures," A. D. Garrison, (assigned to Texaco Development Corp.), U.S. 2,621,117 (1952) December 9.
- HT26. "Partial Combustion," C. F. Teichmann, (assigned to Texaco Development Corp.), U.S. 2,660,521 (1953) November 24.
- HT27. "Hydrocarbon-Conversion Process," F. J. Jenny, (assigned to Texaco Development Corp.), U.S. 2,698,830 (1955) January 4.
- HT28. "Gaseous Mixture Containing Carbon Monoxide and Hydrogen," C. R. Carkeek, (assigned to Texaco Development Corp.), Brit. 734,475 (1955) August 3.
- HT29. "Synthesis Gas," C. F. Teichmann, (assigned to Texaco Development Corp.), Brit. 755,946 (1956) August 29.
- HT30. "Hydrogen-Nitrogen Mixtures and Acetylene," F. B. Sellers and H. V. Rees, (assigned to Texaco Development Corp.), U.S. 2,764,554 (1956) September 25.
- HT31. "Modified Burner for the Production of Synthesis Gas," D. Eastman, C. P. Marion and W. L. Slater, Jr., (assigned to Texaco Development Corp.), Ger. 1,080,079 (1957) Appl. July 13.
- HT32. "Synthesis Gas," C. G. Ludeman, (assigned to Texaco Development Corp.), U.S. 2,800,402 (1957) July 23.
- HT33. "Carbon Monoxide-Hydrogen Mixtures From Solid Fuels," C. G. Ludeman, (assigned to Texaco Development Corp.), U.S. 2,803,530 (1957) August 20.
- HT34. "Synthesis Gas Production From Liquid Hydrocarbons," (assigned to Texaco Development Corp.), Brit. 885,173 (1961) December 20.
- HT35. "Gasification of Fuel Oil With Free Oxygen and Steam," D. Eastman, D. M. Strasser, F. E. Guptill and C. P. Marion, (assigned to Texaco Development Corp.), Ger. 1,055,742 (1959) April 23.
- HT36. "Control of Gas-Phase Reactions, Especially Oxidation of Hydrocarbon Gases," B. H. Sage, (assigned to Texaco Development Corp.), U.S. 2,908,733 (1959) October 13.
- HT37. "Generation of Carbon Monoxide and Hydrogen," P. L. Paull, (assigned to Texaco Development Corp.), U.S. 2,932,561 (1960) April 12.
- HT38. "Burner for Production of Synthesis Gas," (assigned to Texaco Development Corp.), Brit. 845,310 (1960) August 17.
- HT39. "Hydrogen," D. B. Eastman, (assigned to Texaco Development Corp.), Ger. 1,117,091 (1961) November 16.

- HT40. "Synthesis Gas Generation," B. Reynolds, (assigned to Texaco Development Corp.), U.S. 3, 232, 728 (1966) February 1.
- HT41. "Annulus-Type Burner for Production of Synthesis Gas," F. D. Hoffert and T. M. Engle, (assigned to Texaco Development Corp.), U.S. 3, 255, 966 (1966) June 14.
- HT42. "Synthesis Gas Generation," C. P. Marion, (assigned to Texaco Development Corp.), S. African 67 04, 807 (1968) January 18.
- HT43. "Production of Hydrogen From Liquid Hydrocarbons at Elevated Pressures," (assigned to Texaco Development Corp.), Fr. 1, 572, 582 (1969) June 27.
- HT44. "Synthesis Gas," W. G. Schlinger, W. L. Slater and R. M. Dille, (assigned to Texaco Development Corp.), Ger. Offen. 1, 926, 919 (1969) December 4.
- HT45. "Hydrogen-Rich Gas by Partial Oxidation of Liquid Hydrocarbons at High Pressures," W. G. Schlinger, W. L. Slater and R. M. Dille, (assigned to Texaco Development Corp.), S. African 68 05, 802 (1969) December 10.
- HT46. "Reducing Gas," (assigned to Texaco Development Corp.), Brit. 1, 178, 515 (1970) January 21.
- HT47. "Synthesis Gas," W. G. Schlinger, W. L. Slater and R. M. Dille, (assigned to Texaco Development Corp.), Brit. 1, 193, 202 (1970) May 28.
- HT48. "Synthesis Gas," R. Blake, (assigned to Texaco Development Corp.), Ger. Offen. 2, 056, 824 (1971) May 27.
- HT49. "Hydrocarbon-Derived Reducing Gas," R. Blake and C. G. Ludeman, (assigned to Texaco Development Corp.), Ger. Offen. 1, 965, 366 (1971) July 15.
- HT50. "Oxo Synthesis Gas," R. Blake, (assigned to Texaco Development Corp.), U.S. 3, 723, 344 (1973) March 27.
- HT51. "Synthesis Gas," R. Blake, (assigned to Texaco Development Corp.), U.S. 3, 723, 345 (1973) March 27.
- HT52. "Gas Mixtures for Reducing Metal Ores," C. P. Marion, (assigned to Texaco Development Corp.), Ger. Offen. 2, 244, 851 (1973) June 28.
- HT53. "Synthesis Gas," H. V. Atwell, (assigned to Texas Co.), U.S. 2, 448, 290 (1948) August 31.
- HT54. "Motor Fuel," L. C. Kemp, Jr., (assigned to Texas Co.), U.S. 2, 461, 064 (1949) February 8.

- HT55. "Conversion of Hydrocarbon Gas Into Carbon Monoxide and Hydrogen," L. P. Gaucher, (assigned to The Texas Co.), U. S. 2, 483, 132 (1949) September 27.
- HT56. "Combination Process for the Hydrogenation of Carbon Monoxide and the Production of Ammonia," L. C. Kemp, Jr., (assigned to Texas Co.), U. S. 2, 494, 561 (1950) January 17.
- HT57. "Hydrogen and Carbon Monoxide," D. B. Eastman, (assigned to Texas Co.), U. S. 2, 523, 284 (1950) September 26.
- HT58. "Carbon Monoxide and Hydrogen From Powdered Coal," L. P. Gaucher, (assigned to Texas Co.), U. S. 2, 558, 746 (1951) July 3.
- HT59. "Synthesis Gas (From Hydrocarbons)" D. B. Eastman and L. P. Gaucher, (assigned to Texas Co.), U. S. 2, 582, 938 (1952) January 15.
- HT60. "Synthesis of Hydrocarbons," H. V. Atwell, (assigned to Texas Co.), U. S. 2, 583, 134 (1952) January 22.
- HT61. "Conversion of Hydrocarbonaceous Material Into Synthesis Gas," L. Jacolev and L. P. Gaucher, (assigned to Texas Co.), U. S. 2, 606, 826 (1952) August 12.
- HT62. "Water Gas," H. V. Atwell, (assigned to Texas Co.), U. S. 2, 632, 690 (1953) March 24.
- HT63. "Synthesis Gas Generation," F. H. Moore, (assigned to Texas Co.), U. S. 2, 655, 443 (1953) October 13.
- HT64. "Preparation of Synthesis Gas at Elevated Pressures," L. P. Gaucher, (assigned to Texas Co.), U. S. 2, 662, 004 (1953) December 8.
- HT65. "Synthesis Gas," C. W. Watson, (assigned to Texas Co.), U. S. 2, 671, 013 (1954) March 2.
- HT66. "Carbon Monoxide and Hydrogen," C. A. Coghlan, (assigned to Texas Co.), U. S. 2, 684, 896 (1954) July 27.
- HT67. "Motor Gasoline From Hydrocarbon Stocks," C. A. Coghlan, (assigned to Texas Co.), U. S. 2, 698, 782 (1955) January 4.
- HT68. "Carbon Monoxide From Solid Fuels," H. V. Atwell, (assigned to Texas Co.), U. S. 2, 761, 772 (1956) September 4.
- HT69. "Engine Generation of Hydrogen and Carbon Monoxide," J. B. Malin, (assigned to Texas Co.), U. S. 2, 781, 253 (1957) February 12.
- HT70. "Synthesis Gas for Ammonia Manufacture," D. B. Eastman and L. P. Gaucher, (assigned to Texas Co.), U. S. 2, 789, 094 (1957) April 16.

- HT71. "Synthesis Gas," L. Jacolev and L. P. Gaucher, (assigned to Texas Co.), U.S. reissue 24,328 (1957) June 11.
- HT72. "Ammonia-Synthesis Feed Gas," D. B. Eastman, (assigned to Texas Co.), U.S. 2,795,558 (1957) June 11.
- HT73. "Gasification of Heavy Liquid Hydrocarbons," D. M. Strasser, F. E. Guptill and C. P. Marion, (assigned to Texas Co.), U.S. 2,809,104 (1957) October 8.
- HT74. "Ammonia Synthesis Feed Gas," D. B. Eastman, R. M. Dille and R. W. Chapman, (assigned to Texas Co.), U.S. 2,865,864 (1958) December 23.
- HT75. "Carbon Monoxide From Solid Fuels," H. V. Atwell, (assigned to Texas Co.), U.S. 2,879,148 (1959) March 24.
- HT76. "Hydrogen Production for Fuel Cell Modules," (assigned to Texas Instruments Inc.), Brit. 1,182,499 (1970) February 25.
- HT77. "Partial Oxidation of Hydrocarbons," R. C. Goodman, (assigned to Texas Instruments Inc.), U.S. 3,685,977 (1972) August 22.
- HT78. "Synthesis Gas, City Gas, and Reducing Gas," H. F. A. Topsoee, Fr. 1,551,065 (1968) December 27.
- HT79. "Gaseous Mixtures Containing Hydrogen, Carbon Monoxide and (or) Carbon Dioxide, and Possibly Nitrogen by Reforming Hydrocarbons or Hydrocarbon Mixtures in the Gas Phase and a Catalyst for the Process," H. F. A. Topsoee, E. Soerensen and E. Mogensen, Dan. 123,586 (1972) July 10.
- HT80. "Catalytic Reforming," (assigned to Toyo Engineering Corp.), Fr. 1,571,927 (1969) June 20.
- HT81. "Hydrogen by Hydrocarbon Gasification," (assigned to Toyo Engineering Corp.), Fr. 1,571,968 (1969) June 20.
- HT82. "Forming Hydrogen-Rich Gaseous Mixtures by Catalytic Vapor Reforming," T. Tomita, K. Kikuchi and T. Sakamoto, (assigned to Toyo Engineering Corp.), Ger. Offen. 2,143,608 (1972) March 9.
- HT83. "Hydrogen-Rich Gas Mixtures," T. Tomita, (assigned to Toyo Engineering Corp.), Ger. Offen. 2,219,061 (1972) November 2.
- HT84. "Transformation of Carbon Monoxide Into Hydrogen and Carbon Dioxide," S. Tsunemi and Y. Katsumi, Japan 7715 (1951) December 18.
- HT85. "Hydrogen Gas Producers," C. B. Tully, Brit. 16,932 (1916) July 3.
- HT86. "Purifying Hydrogen," L. S. Twomey, U.S. 2,022,165 (1935) November 26.

- HU1. "Separation of Carbon From Gas From Thermal Cracking of Hydrocarbons," H. Kono, K. Terai, S. Nakai, T. Niwa, Y. Tamura, H. Fujii, K. Mashida, M. Saito and N. Ueda, (assigned to Ube Industries, Ltd.), Japan Kokai 73 32, 104 (1973) April 27.
- HU2. "Hydrogen," R. H. Uhlinger, U.S. 1, 363, 488 (1921) December 28.
- HU3. "Acetylene," G. H. Smith, (assigned to Union Carbide Corp.), Brit. 821, 109 (1959) September 30.
- HU4. "Synthesis Gas by Noncatalytic Partial Oxidation of Saturated Hydrocarbons," W. E. Burndrett, Jr. and W. H. Hoffman, (assigned to Union Carbide Corp.), Fr. 1, 324, 715 (1963) April 19.
- HU5. "Hydrogen Production by Steam Reforming," J. E. Johnson, T. L. Singman and N. P. Vahldieck, (assigned to Union Carbide Corp.), U.S. 3, 361, 534 (1968) January 2.
- HU6. "Production of Acetylenes by the Cracking of Hydrocarbons in an Electric Arc Generated by Mercury Electrodes," H. E. Kennedy, (assigned to Union Carbide Corp.), U.S. 3, 373, 099 (1968) March 12.
- HU7. "Apparatus for Cracking Hydrocarbons to Produce Hydrogen," C. E. Winters, (assigned to Union Carbide Corp.), Fr. 1, 524, 503 (1968) May 10.
- HU8. "Production of Synthesis Gas by Refining Methane Over a Nickel Catalyst," A. O. Ross, (assigned to Union Carbide Corp.), Brit. 1, 113, 376 (1968) May 15.
- HU9. "Hydrogen Production by Pyrolysis of Hydrocarbons," G. D. Bagley and H. W. de W. Erasmus, (assigned to Union Carbide Corp.), U.S. 2, 071, 721 (1937) February 23.
- HU10. "Apparatus for Producing Hydrogen-Nitrogen Mixtures," H. D. Erasmus, (assigned to Union Carbide and Carbar Research Laboratory, Inc.) U.S. 2, 178, 833 (1940) November 7.
- HU11. "Hydrogen," (assigned to Union Chimique Belge, Soc. Anon.), Brit. 341, 393 (1929) June 22.
- HU12. "Hydrogen," (assigned to Union Chimique Belge, Soc. Anon.), Brit. 343, 172 (1929) June 22.
- HU13. "The Decomposition of a Mixture of Methane and Water Vapor by Means of Heat," (assigned to Union Chimique Belge, Soc. Anon.), Belg. 361, 718 (1929) July 31.
- HU14. "The Conversion of Gaseous Hydrocarbons Into Hydrogen," (assigned to Union Chimique Belge, Soc. Anon.), Belg. 363, 395 (1929) September 30.
- HU15. "Hydrogen," (assigned to Union Chimique Belge, Soc. Anon.), Fr. 682, 550 (1929) October 1.

- HU16. "Hydrogen and Carbon Monoxide," (assigned to Union Chimique Belge Soc. Anon.), Fr. 682,549 (1929) October 1.
- HU17. "Hydrogen," F. A. Pallemarts, (assigned to Union Chimique Belg), Brit. 360,148 (1930) October 3.
- HU18. "Catalytic Treatment of Gases and Vapors, as in Treating Isobutane Gas to Form Unsaturated Compounds and Hydrogen," W. F. Huppke, (assigned to Union Oil Co. of Calif.), U. S. 2,231,424 (1941) February 11.
- HU19. "Hydrogen," H. C. Reed and C. H. O. Berg, (assigned to Union Oil of California), U. S. 2,635,947 (1953) April 21.
- HU20. "Hydrogenation of Heavy Oil," H. C. Reed, C. Berg and C. E. Leffert, (assigned to Union Oil Co. of California), U. S. 2,694,622 (1954) November 16.
- HU21. "Hydrogen," C. Berg, (assigned to Union Oil Co. of California), Brit. 811,749 (1959) April 8.
- HU22. "Preparation of Free-Flowing Sulfur Compositions," M. J. Block, (assigned to Union Oil Co. of California), U. S. 3,661,530 (1972) May 9.
- HU23. "Cracking of Gaseous Paraffin Hydrocarbons With Steam and Carbon Dioxide to Hydrogen and Carbon Monoxide," R. Schultze-Bentrop (assigned to Union Rheinische Braunkohlen Kraftstoff Akt.-Ges.), Ger. 1,036,824 (1958) August 21.
- HU24. "Gasification of Solid Fuels," (assigned to Union Rheinische Braunkohlen Kraftstoff Akt.-Ges.), Brit. 820,213 (1959) September 16.
- HU25. "Hydrogen for Fuel Cell," (assigned to United Aircraft Corp.), Neth. Appl. 6,609,447 (1967) January 9.
- HU26. "Hydrogen," (assigned to United Aircraft Corp.), Neth. Appl. 6,609,376 (1967) February 6.
- HU27. "Reforming Carbonaceous Material Into Hydrogen," (assigned to United Aircraft Corp.), Neth. Appl. 6,610,508 (1967) February 6.
- HU28. "Apparatus for Reforming Carbonaceous Material Into Hydrogen," (assigned to United Aircraft Corp.), Neth. Appl. 6,610,509 (1967) February 6.
- HU29. "Preparation of Hydrogen by Catalytic Reforming of Hydrocarbons," (assigned to United Aircraft Corp.), Neth. Appl. 6,610,510 (1967) February 6.
- HU30. "Preparation of Hydrogen by Catalytic Reforming of Material Containing Bound Hydrogen and Carbon," (assigned to United Aircraft Corp.), Neth. Appl. 6,611,001 (1967) February 6.

- HU31. "Hydrogen From Hydrocarbons: Hydrodesulfurization of the Feed," R. F. Buswell, H. J. Setzer and R. A. Sederquist, (assigned to United Aircraft Corp.), U.S. 3,476,534 (1969) November 4.
- HU32. "Integrated Reformer Unit," R. A. Sederquist, (assigned to United Aircraft Corp.), U.S. 3,531,263 (1970) September 29.
- HU33. "Synthesis of Gas Rich in Hydrogen and Carbon Monoxide," (assigned to United Engineers and Constructors Inc.), Brit. 685,359 (1952) December 31.
- HU34. "New Cyclic Process for the Preparation of Gas Rich in Hydrogen," J. T. Pinston, Jr. and C. G. Milbourne, (assigned to United Engineers and Constructors Inc.), Fr. 1,449,208 (1966) August 12.
- HU35. "Production of Hydrogen-Rich gas," C. G. Milbourne and J. T. Pinston, Jr., (assigned to United Engineers and Constructors Inc.), Fr. 1,460,140 (1966) November 25.
- HU36. "Cyclic Catalytic Reforming of Hydrocarbons," H. V. Erickson and F. W. Hartzel, (assigned to United Gas Improvement Co.), U.S. 2,759,805 (1956) August 21.
- HU37. "Gas Generation," L. L. Newman, (assigned to United States of America, as Represented by the Secy. of Interior), U.S. Pat. Appl. 687,542 (1952)
- HU38. "Hydrogen," (assigned to Universal Oil Products Co.), Brit. 635,493 (1950) April 12.
- HU39. "Hydrogen," V. N. Ipatieff and G. S. Monroe, (assigned to Universal Oil Products Co.), U.S. 2,750,261 (1956) June 12.
- HU40. "Conversion of Heavy Hydrocarbons," F. A. W. Leffer, (assigned to Universal Oil Products Co.), U.S. 2,917,451 (1959) December 15.
- HU41. "Continuous Process for the Production of Hydrogen," C. H. Watkins, (assigned to Universal Oil Products Co.), U.S. 3,017,250 (1962) January 16.
- HU42. "Steam-Iron Process for Manufacturing High-Purity Hydrogen," C. H. Watkins, (assigned to Universal Oil Products Co.), U.S. 3,027,238 (1962) March 27.
- HU43. "Hydrogen," (assigned to Universal Oil Products Co.), Brit. 944,810 (1963) December 18.
- HU44. "Method and Equipment for the Preparation of Hydrogen," (assigned to Universal Oil Products Co.), Neth. Appl. 6,400,475 (1964) July 23.

- HU45. "Hydrogen From Light Hydrocarbons," (assigned to Universal Oil Products Co.), Brit. 973, 755 (1964) October 28.
- HU46. "Abrasion-Resistant Catalysts for Cracking Hydrocarbons to Hydrogen," (assigned to Universal Oil Products Co.), Neth. Appl. 6, 414, 844 (1965) June 21.
- HU47. "Combined Hydrogen-Producing and -Consuming Units," J. B. Pohlenz and D. H. Belden, (assigned to Universal Oil Products Co.), U. S. 3, 189, 538 (1965) June 15.
- HU48. "Fluidized Catalytic Hydrogen Production," J. Hoekstra, (assigned to Universal Oil Products Co.), U. S. 3, 197, 284 (1965) July 27.
- HU49. "Hydrogen Made From Hydrocarbon Oils," C. V. Berger, (assigned to Universal Oil Products Co.), U. S. 3, 205, 044 (1965) September 7.
- HU50. "Catalytic Conversion of Hydrocarbons to Hydrogen," J. Hoekstra, (assigned to Univesal Oil Products Co.), U. S. 3, 216, 801 (1965) November 9.
- HU51. "Combination of Hydrogen Producing and Hydrogen Consuming Units," J. B. Pohlenz and D. H. Belden, (assigned to Universal Oil Products Co.), U. S. 3, 248, 317 (1966) April 26.
- HU52. "Preparation of Hydrogen From Hydrocarbons," J. Hoekstra and V. Haensel, (assigned to Universal Oil Products Co.), U. S. 3, 340, 011 (1967) September 5.
- HU53. "Hydrocarbon Stripping of Regenerated Catalyst in a Hydrogen-Producing System," L. C. Hardison, (assigned to Universal Oil Products Co.), U. S. 3, 306, 707 (1967) February 28.
- HU54. "Hydrogen Producing System," D. E. McCartney and H. A. Hauser, (assigned to Universal Oil Products Co.), U. S. 3, 314, 761 (1967) April 18.
- HU55. "Pyrolysis of Methane to Hydrogen and Carbon With an Alumina-Nickel Catalyst," J. C. Hayes, (assigned to Unviersal Oil Products Co.), U. S. 3, 355, 248 (1967) November 28.
- HU56. "Hydrogen From Natural Gas," E. L. Pollitzer and V. Haensel, (assigned to Universal Oil Products Co.), U. S. 3, 361, 535 (1968) January 2.
- HU57. "Hydrogen From Methane," J. C. Hayes, (assigned to Universal Oil Products Co.), U. S. 3, 379, 504 (1968) April 23.
- HU58. "Naphtha Catalytic Reforming," D. B. Carson, (assigned to Universal Oil Products Co.), U. S. 3, 428, 549 (1969) February 18.
- HU59. "Catalytic Hydroforming," D. B. Carson, (assigned to Universal Oil Products Co.), S. African 69 01, 083 (1969) August 21.

- HU60. "Catalytic Petroleum Reforming," D. B. Carson, (assigned to Universal Oil Products Co.), Ger. Offen. 1,907,624 (1970) September 3.
- HU61. "Separating the Effluent From a Catalytic Reforming Zone Utilizing Absorption and Fractionation Techniques," W. B. Borst, Jr., (assigned to Universal Oil Products Co.), U.S. 3,537,978 (1970) November 3.
- HU62. "Separating the Effluent From a Hydrocarbon Conversion Process Reaction Zone," R. E. Sutherland, (assigned to Universal Oil Products Co.), U.S. 3,546,099 (1970) December 8.
- HU63. "Catalytic Reforming of Naphtha," (assigned to Universal Oil Products Co.), Fr. Demande 2,096,854 (1972) April 7.
- HU64. "Converting Hydrocarbons and Producing Purified Hydrogen," J. T. Forbes, (assigned to Universal Oil Products Co.), Brit. 1,306,160 (1970) July 6.
- HU65. "Nitrogen-Hydrogen Mixture," V. P. Semenov and I. L. Leites, (assigned to U.S.S.R. State Scientific-Research and Design Institute of The Nitrogen Industry) 239,278 (1970) August 21.
- HV1. "Fuel Gas With High Calorific Power," P. Van Ackerren and W. Malkomes, Ger. 973,666 (1960) April 28.
- HV2. "Hydrogen-Rich Gas From Light Hydrocarbons, Especially Nitrogen-Rich Natural Gas," B. Wolf, M. Heinz, K. Schoene, H. Hackel, T. Wolfgang, B. Moeller, W. Mottitschka and D. Roscher, (assigned to VEB Gaskombinat Schwarze Pumpe), Ger. Offen. 2,139,482 (1972) November 2.
- HV3. "Apparatus for Cooling Cracked Gases From Steam Reformers," E. Herzog and P. Johst, (assigned to VEB Schwermaschinenbau Karl Liebknecht; Magdeburg-Kombinat für Dieselmotoren und Industrieanlagen), Ger. Offen. 2,217,197 (1973) May 3.
- HV4. "Cracked Gas for Fuel Cell From Liquid Fuels by Spark Discharge," G. Tybus, (assigned to Vereinigte Flugtechnische Werke G.m.b.H.), Ger. 1,284,026 (1968) November 28.
- HV5. "Production of Hydrogen, V. V. Veselov, V. T. Kharlambova and N. A. Kovalenko, U.S.S.R. 165,680 (1964) October 26.
- HV6. "Iron-Ore-Reducing Gas From Methane and Other Hydrocarbons," S. Uberto, (assigned to Vetrocoke Societa per azioni), Ital. 499,592 (1954) November 13.
- HV7. "Hydrogen," M. K. Vinther, U.S. 1,817,726 (1931) August 4.
- HW1. "Hydrogen and Sulfur," (assigned to Werschen-Weissenfelder Braunkohlen A.-G.), Ger. 473,770 (1927) January 14.

- HW2. "Conversion of Gaseous Hydrocarbons," (assigned to Wiener Stadtwerke), Austrian 194,367 (1958) January 10.
- HW3. "Dissociating Hydrocarbon Gases and Vapors to Produce a Mixture of Nitrogen and Hydrogen in Determined Proportions," W. D. Wilcox, U. S. 1,901,136 (1933) March 14.
- HW4. "Carbon Monoxide and Hydrogen," W. D. Wilcox, U.S. 1,905,326 (1933) April 25.
- HW5. "Apparatus for Production of Carbon Black and Hydrogen by Dissociation of Hydrocarbon Gases and Vapors," W. D. Wilcox, U. S. 1,916,545 (1933) July 4
- HW6. "Producing a Carbon Monoxide-Hydrogen Mixture," W. D. Wilcox, U.S. 2,199,475 (1940) May 7.
- HW7. "Mixture of Carbon Monoxide and Hydrogen in Controlled Proportions Suitable for Methanol Synthesis," W. D. Wilcox, U. S. 2,256,333 (1942) September 16.
- HW8. "Dissociation of Hydrocarbons," F. E. Wilkinson, (assigned to Wilkinson High Frequency Ltd.), Brit. 697,224 (1953) September 16.
- HW9. "Manufacture of Synthesis Gas With Simultaneous Generation of Mechanical Energy," K. Wopperer, Ger. 1,026,130 (1958) March 13.
- HZ1. "Endothermic Reactions," G. Zakerian, Brit. 791,899 (1958) March 12.
- HZ2. "Preparation of Butadiene and Mixtures of Hydrogen and Carbon Monoxide," N. D. Zelinskii, A. A. Balandin, O. K. Bogdanova and A. P. Shcheglova, U.S.S.R. 62,235 (1964) May 8.

OIL SHALE

- KC1. "Hydrogen Production From a Kerogen-Depleted Shale Formation," M. M. Holm, (assigned to Chevron Research Co.), U.S. 3,605,890 (1971) September 20.
- KC2. "Treatment of Carbon-Rich Material," L. Thibaut, (assigned to Compagnie francaise des essences synthetiques), Fr. 1,022,624 (1953) March 6.
- KG1. "Recovery of Oil From Oil Shale, With Simultaneous Production of Hydrogen," P. H. Gifford, U.S. 3,577,338 (1971) May 4.
- KI1. "Production of Low Molecular Weight Hydrocarbons From Solid Fossil Fuels," M. A. Elliot, H. R. Linden and E. B. Shultz, Jr., (assigned to Institute of Gas Technology), U.S. Patent 2,991,164 (1961) July 4.
- KI2. "Free Fall Shale Hydrogasification," H. F. Feldmann, (assigned to Institute of Gas Technology), U.S. Patent 3,421,868 (1969) January 14.
- KI3. "Production of Pipeline-Quality Gas From Oil Shale," H. R. Linden, (assigned to Institute of Gas Technology), U.S. 3,703,052 (1972) November 21.
- KI4. "Fossil Fuel Hydrogasification Processes for Production of Synthetic Pipeline Gas," (assigned to Institute of Gas Technology), U.S. Patent 3,708,269 (1973) January 2.
- KP1. "Fischer-Tropsch Synthesis Gas From Oil Shale," A. Clark, (assigned to Phillips Petroleum Co.), U.S. 2,452,634 (1948) November 2.
- KP2. "Recovery of Hydrocarbons From Oil Shale," A. Clark and H. R. Sailors, (assigned to Phillips Petroleum Co.), U.S. 2,474,345 (1949) June 28.

COAL AND RELATED SOURCES

- CA1. "Hydrogen," L. S. Abbot, U.S. 1,345,905 (1920), July 6.
- CA2. "Nitrogen-Hydrogen Mixture," V. M. Alekseevskii and A. I. Morozov, Russ. 52,280 (1937) December 31.
- CA3. "Hydrogen," (assigned to Patentverwertungs A.-G. "Alpina"), Fr. 698,484 (1930) January 31.
- CA4. "Hydrogen," (assigned to Patentverwertungs A.-G. "Alpina"), Ger. 574,998 (1933) April 21.
- CA5. "Iron Oxide-Magnesium Chromate Catalyst," K. D. Ashley and W. B. Innes, (assigned to American Cyanamid Co.), U.S. 2,567,140 (1951) September 4.
- CA6. "Hydrogen," F. Hansgirg, (assigned to American Magnesium Metals Corp.), U.S. 1,926,587 (1933) September 12.
- CA7. "Hydrogen," F. von Kahler, (assigned to American Magnesium Metals Corp.), U.S. 2,147,780 (1939) February 21.
- CA8. "Generating Hydrogen," (assigned to American Magnesium Metals Corp.), Ger. 706,868 (1941) May 8.
- CA9. "Hydrogen," A. G. Carter, (assigned to American Magnesium Metals Corp.), U.S. 2,517,177 (1950) August 1.
- CA10. "Hydrogen," M. Frankl, (assigned to American Oxythermic Corp.), U.S. 2,202,374 (1940) May 28.
- CA11. "Carbon and Hydrogen," (assigned to Ateliers Generaux De Construction, S.A.), Ger. 561,312 (1931) October 7.
- CA12. "Hydrogen Generator," D. K. Wunderlich, F. E. Carleton and E. R. Brownscombe, (assigned to Atlantic Richfield Co.), U.S. 3,620,697 (1971) November 16.
- CA13. "Catalyst For Producing Hydrogen From Carbon Monoxide and Steam," H. E. Heissler, (assigned to Atmospheric Nitrogen Corp.), U.S. 1,672,528 (1928) June 5.
- CA14. "Catalyst," E. D. Crittenden, (assigned to Atmospheric Nitrogen Corp.), Can. 318,433 (1931) December 29.
- CA15. "Coal Conversion to Lower-Molecular-Weight Hydrocarbons," P. R. Ammann, R. F. Baddour and T. W. Mix, (assigned to Avco Corp.), U.S. 3,384,467 (1968) May 21.
- CA16. "Gasification of Highly Volatile Fuels in a Producer With a Revolving Cone Grate," A. Chwistek and A. Glazowski, (assigned to Zaklady Azotowe), Pol. 43,713 (1960) November 15.

- CB1. "Synthesis-Gas Reactor and Heat Exchanger," J. L. Oberg, (assigned to Babcock Wilcox Co.), U.S. 2,862,480 (1958) December 2.
- CB2. "Hydrogen," (assigned to Badische), Ger. 292,615 (1912) July 24.
- CB3. "Obtaining Hydrogen by the Catalytic Transformation of Mixtures of Carbon Monoxide and Steam," (assigned to Badische), Ger. 293,585 (1914) May 14.
- CB4. "Hydrogen," (assigned to Badische), Aust. 72,430 (1916) September 11.
- CB5. "Production of Fuel Gas, in Particular Synthesis Gas, in Gas Producers," (assigned to Badische Anilin- und Soda-Fabrik), Brit. 661,148 (1951) November 14.
- CB6. "Carbon Monoxide and Hydrogen Production in Run-Off Gas Producers," (assigned to Badische Anilin- und Soda-Fabrik), Brit. 685,485 (1953) July 7.
- CB7. "Conversion of Carbon Monoxide and Water Into Carbon Dioxide and Hydrogen," F. Markert and H. Krome, (assigned to Badische Anilin- und Soda-Fabrik Akt.-Ges.), Ger. 926,127 (1955) April 7.
- CB8. "Fuel Gas, Especially Synthesis Gas, From Gas Generators With Tapholes," F. Markert and E. Kittel, (assigned to Badische Anilin- und Soda-Fabrik Akt.-Ges.), Ger. 1,020,434 (1957) December 5.
- CB9. "Fuel Gas of High Calorific Value and Synthesis Gas Low in Methane," F. Markert and E. Kittel, (assigned to Badische Anilin- und Soda-Fabrik Akt.-Ges.), Ger. 1,020,435 (1957) December 5.
- CB10. "Conversion of Carbon Monoxide and Steam Into Hydrogen and Carbon Dioxide," H. Krome, (assigned to Badische Anilin- und Soda-Fabrik Akt.-Ges.), Ger. 1,091,546 (1960) October 27.
- CB11. "Fuel Gas, Especially Synthesis Gas," F. Markert and W. Funk, (assigned to Badische Anilin- und Soda-Fabrik Akt.-Ges.), Ger. 1,095,977 (1961) June 22.
- CB12. "Hydrogen," (assigned to Badische Anilin- und Soda-Fabrik A.-G.), Neth. Appl. 6,408,438 (1965) February 1.
- CB13. "Catalysts For the Conversion of Carbon Monoxide to Carbon Dioxide by Steam," (assigned to Badische Anilin- und Soda-Fabrik A.-G.), Fr. 1,566,831 (1969) May 9.
- CB14. "Hydrogen From Carbon Monoxide and Steam," (assigned to Badische Anilin- und Soda-Fabrik A.-G.), Fr. 1,575,915 (1969) July 25.
- CB15. "Catalytic Preparation of Hydrogen From Carbon Monoxide and Water," (assigned to Badische Anilin- und Soda-Fabrik A.-G.), Fr. Demande 2,014,856 (1970) April 24.

- CB16. "Synthesis Gas From Solid Fuel," E. G. Bailey, (assithe to Bailey Inventions, Inc.), U.S. 3,062,632 (1962) November 6.
- CB17. "Hydrogen," W. J. Bates and W. R. Bates, Brit. 134,155 (1919) March 13.
- CB18. "Hydrogen; Charging Retorts," W. J. Bates and W. R. Bates, Brit. 137,674 (1919) March 13.
- CB19. "Hydrogen From Coke Furnaces," R. Battig, Fr. 634,711 (1927) May 19.
- CB20. "Hydrogen," R. Battig, Fr. 35,613 (1928) July 13.
- CB21. "Carbon Monoxide Conversion in Gas Mixtures, Especially Water Gas," F. Baumann, Ger. (East) 9597 (1955) April 12.
- CB22. "Conversion of Carbon Monoxide Into a Mixture of Carbon Dioxide and Hydrogen," F. Baumann, U.S. 2,870,096 (1959) January 20.
- CB23. "Two-Pressure Plant For Carbon Monoxide Conversion," F. Baumann, Ger. 1,076,633 (1960) March 3.
- CB24. "Hydrogen," J. Bellay, Fr. 647,478 (1928) January 28.
- CB25. "Hydrogen," J. Bellay, Fr. 664,038 (1928) November 16.
- CB26. "Hydrogen," J. Bellay, Can. 282,952 (1928) September 4.
- CB27. "Pure Hydrogen From Water Gas," J. Bellay, U.S. 1,815,090 (1931) July 21.
- CB28. "Decomposition of Water," P. A. J. M. Benezet, Fr. 32,955 (1926) July 10.
- CB29. "Hydrogen," (assigned to Berlin-Anhaltische Maschinenbau Akt-Ges.), Ger. 294,039 (1913) May 22.
- CB30. "Hydrogen From Sulfur-Containing Hydrocarbon Fuels," E. A. Pelczarski and J. A. Karnavas, (assigned to Black, Sivalls and Bryson, Inc.), Ger. Offen. 1,955,115 (1970) June 18.
- CB31. "Hydrogen," C. Blair, D. A. B. Mclean and J. L. Ferguson, Brit. 143,064 (1919) June 11.
- CB32. "Process and Apparatus Using Resonant Sound Wave and Sonic Flame For the Production of Carbon Monoxide, Synthesis Gases, and Synthetic Hydrocarbons," A. G. Bodine, Jr., U.S. 2,745,861 (1956) May 15.
- CB33. "Hydrogen," H. Bomke, Ger. 516,843 (1926) October 17.
- CB34. "Hydrogen," K. Keller and W. Klempt, (assigned to H. Bomke), Ger. 555,003 (1927) December 2.

- CB35. "Hydrogen," C. Bosch, A. Mittasch and C. Beck, U.S. 1,330,772 (1920) February 10.
- CB36. "Producing Hydrogen," C. Bosch, A. Mittasch and E. Beck, Can. 204,628 (1920) October 5.
- CB37. "Hydrogen," S. W. Bray and I. H. Balfour, U.S. 1,360,876 (1921) November 30.
- CB38. "Hydrogen," S. W. Bray and I. H. Balfour, (assigned to British Oxygen Co.), Brit. 122,474 (1918) January 23.
- CB39. "Hydrogen," I. H. Balfour, (assigned to British Oxygen Co.), Brit. 144,751 (1919) February 14.
- CC1. "Hydrogen For Use in Catalytic Synthesis," L. Casale, U.S. 1,793,677 (1931) February 24.
- CC2. "Catalytic Production of Hydrogen," (assigned to M. Casale-Sacchi), Brit. 297,135 (1927) June 13.
- CC3. "Hydrogen," (assigned to Maria Casale-Sacchi), Swiss 131,095 (1927) July 27.
- CC4. "Hydrogen," (assigned to Maria Casale-Sacchi), Ger. 544,958 (1927) August 5.
- CC5. "Hydrogen," (assigned to Maria Casale-Sacchi), Austrian 119,928 (1930) June 15.
- CC6. "Metallic Composition For Producing Hydrogen by Heating With Steam or Water," W. H. Groombridge and J. E. Newns, (assigned to Celanese Corp. of America), U.S. 2,234,245 (1941) March 11.
- CC7. "Device and Continuous Method For Generating Gas of High Hydrogen Content," K. Kaczmarek, J. Naczynski, E. Halas and M. Wendeker, (assigned to Centralne Laboratorium Gazownictwa), Pol. 67,074 (1973) February 28.
- CC8. "Method of Producing Hydrogen From a Carbon Monoxide-Containing Gas Stream and Heat Recovery," G. R. James, (assigned to Chemical Construction Corp.), U.S. 3,292,998 (1966) December 20.
- CC9. "Synthesis Gas," D. I. Mendeleev, M. I. Boyarkin, S. V. Kaftanov, A. F. Klyushnew and S. D. Fedoseev, (assigned to Chemical-Technological Institute, Moscow), U.S.S.R. 186,608 (1966) October 3.
- CC10. "Hydrogen," (assigned to Chemische Fabrik Griesheim-Elektron), Ger. 284,816 (1915) June 5.
- CC11. "Hydrogen," F. Bergius, (assigned to Chemische Fabrik Akt.-Ges. vorm M. Milch Co.), Ger. 286,961 (1915) September 1.

- CC12. "Synthesis Gas," (assigned to Chemische Werke Bergkamen A.-G.), Brit. 730,871 (1955) June 1.
- CC13. "Hydrogen Production by Reaction of Carbon With Steam or Steam and Oxygen," P. E. Fischer and M. M. Holm, (assigned to Chevron Research Co.), U.S. 3,615,299 (1971) October 26.
- CC14. "Hydrogen From Water Gas, Etc.," G. Cicali, U.S. 1,807,897 (1931) June 2.
- CC15. "Separating Pure Hydrogen From Gas Mixtures," G. Cicali, U.S. 1,885,059 (1933) October 25.
- CC16. "Methane From Carbon Monoxide in City Gas," H. Cohn, Brit. 352,864 (1929) November 7.
- CC17. "Apparatus For Producing Methane and Hydrogen From Lime, Coal and Steam," L. Colson, U.S. 1,428,879 (1922) September 12.
- CC18. "Nitrogen, Hydrogen and Carbon Monoxide From Residual Coke-Oven Gases," M. E. H. Minotte, (assigned to Compagnie de Bethune), U.S. 1,875,253 (1932) August 30.
- CC19. "Carrying Out Endothermic Reactions in a Fluidized Bed," A. Godel, (assigned to Compagnie Industrielle de Procèdes et d'Applications S.A.), Ger. Offen. 2,134,755 (1972) February 17.
- CC20. "Hydrogen Production by Treating Steam With Iron," J. L. Johnson, F. C. Schora, Jr. and P. B. Tarman, (assigned to Consolidated Natural Gas Service Co., Inc.), Ger. Offen. 2,005,891 (1970) September 10.
- CC21. "Hydrogen," E. Gorin and W. B. Retallick, (assigned to Consolidation Coal Co.), U.S. 3,108,857 (1963) October 29.
- CC22. "Hydrogen," E. Gorin and C. H. Rice, (assigned to Consolidation Coal Co.), U.S. 3,115,394 (1963) December 24.
- CC23. "Gas Mixture Containing Acetylene, Obtained From Water Vapor in an Electric Arc," C. Coupard, Fr. 883,237 (1943) June 28.
- CD1. "Hydrogen From Water Gas," J. H. de Graer), Brit. 212,943 (1923) March 17.
- CD2. "Hydrogen," F. W. de Jahn, Can. 253,481 (1925) September 8.
- CD3. "Solid Fuel For Generating Hydrogen," J. P. Gallagher, (assigned to Delta F. Corp.), Ger. Offen. 2,252,776 (1973) May 3.
- CD4. "Production of Hydrogen by Conversion of Carbon Monoxide," (assigned to Deutsche Gold und Silber-Scheideanstalt vorm. Roessler), Brit. 728,475 (1955) April 20.

- CD5. "Production of Synthesis Gas," (assigned to Deutsche Gold-und Silber-Scheideanstalt vorm. Roessler), Brit. 762,564 (1956) November 28.
- CD6. "Hydrogen," H. Dicke, Ger. 280,964 (1914) December 2.
- CD7. "Gas Mixtures Containing Carbon Monoxide and Hydrogen," (assigned to Didier-Werke A.-G.), Ger. 669,434 (1938) December 24.
- CD8. "Generation of Synthesis Gas With Recovery of Aromatic Hydrocarbons," (assigned to Didier-Werke Akt.-Ges.), Brit. 531,288 (1941) January 1.
- CD9. "Hydrogen and Phosphoric Acid," F. G. Liljenroth, (assigned to Du Pont Ammonia Corp.), U.S. 1,807,790 (1931) June 2.
- CD10. "Preparation of Carbon Monoxide and Hydrogen From Carbonaceous Solids," L. C. Perry, R. H. McKane and D. V. Moses, (assigned to E. I. du Pont de Nemours Co.), U.S. 2,699,384 (1955) January 11.
- CD11. "Synthesis Gas," L. C. Perry, G. A. Hickman and A. E. Hirsch, (assigned to E. I. du Pont de Nemours Co.), U.S. 2,738,263 (1956) March 13.
- CE1. "Hydrogen," E. Edwin, Norw. 43,619 (1927) January 24.
- CE2. "Hydrogen," C. Epnor, Brit. 296,428 (1927) September 2.
- CE3. "Recovery of Volatile Products From Fluidized Coke," J. W. Hermann, (assigned to Esso Research and Engineering Co.), U.S. 2,743,218 (1956) April 24.
- CE4. "Hydrogen," (assigned to Esso Research and Engineering Co.), Brit. 803,766 (1958) October 29.
- CE5. "Hydrogen-Carbon Monoxide Mixtures," P. S. Viles, (assigned to Esso Research and Engineering Co.), U.S. 2,911,293 (1959) November 3.
- CE6. "Production of Hydrogen," C. L. Aldridge, (assigned to Esso Research and Engineering Co.), Ger. Offen. 1,913,854 (1969) November 6.
- CE7. "Hydrogen Production by Catalytic Steam Gasification of Carbonaceous Materials," C. L. Aldridge, D. Buben and R. S. Goldberg, (assigned to Esso Research and Engineering Co.), U.S. 3,740,193 (1973) June 19.
- CF1. "Carbon Disulfide and Hydrogen or Water Gas," (assigned to I. G. Farbenindustrie A.-G.), Brit. 293,172 (1927) May 26.
- CF2. "Hydrogenation of Coal, Etc.," (assigned to I. G. Farbenindustrie A.-G.), Fr. 644,148 (1927) November 18.

- CF3. "Hydrogen," H. Bahr, (assigned to I. G. Farbenindustrie A.-G.), Ger. 506,041 (1929) May 4.
- CF4. "Exothermic Gas Reactions," (assigned to I. G. Farbenindustrie A.-G.), Fr. 683,626 (1929) July 27.
- CF5. "Hydrogen-Nitrogen Mixtures From Bituminous Fuels," (assigned to I. G. Farbenindustrie A.-G.), Brit. 360, 618 (1930) October 15.
- CF6. "Hydrogen," (assigned to I. G. Farbenindustrie A.-G.), Fr. 820,804 (1937) November 19.
- CF7. "Water Gas," (assigned to I. G. Farbenindustrie A.-G.), Brit. 487,714 (1938) June 24.
- CF8. "Gases Rich in Hydrogen," F. Sabel, (assigned to I. G. Farbenindustrie A.-G.), Ger. 678,560 (1939) July 18.
- CF9. "Gas Mixtures," F. Sabel and F. Keilig, (assigned to I. G. Farbenindustrie A.-G.), Ger. 679,601 (1939) August 9.
- CF10. "Gas Rich in Hydrogen and Poor in Carbon Monoxide," (assigned to I. G. Farbenindustrie A.-G.), Fr. 845,252 (1939) August 17.
- CF11. "Hydrogen," G. Fausser, Ital. 459,644 (1950) September 25.
- CF12. "Production of Gas For Ammonia Synthesis From Coal-Gasification and Coke-Oven Gases," H. Weber and K. Tippmer, (assigned to Firma Carl Still), Ger. 1,233,372 (1967) February 2.
- CF13. "Synthesis Gas," L. Seglin and R. T. Eddinger, (assigned to FMC Corp), Ger. Offen. 2,204,990 (1972) August 24.
- CF14. "Apparatus For Synthesis-Gas Manufacture," (assigned to Foster Wheeler Ltd.), Brit. 769,829 (1957) March 13.
- CF15. "Apparatus For Producing Hydrogen and Oxygen by Thermal Decomposition of Water Vapor," G. Fuchs and H. Spath, Ger. 552,308 (1934) September 25.
- CG1. "Gases Rich in H," F. J. Dent and A. Key, (assigned to The Gas Research Board), Brit. 549,838 (1942) December 9.
- CG2. "Hydrogen Manufacture From Steam," H. S. Spacil, (assigned to General Electric Co.), Ger. Offen. 2,301,178 (1973) July 19.
- CG3. "Hydrogen," (assigned to Ges. Fur Linde's Eismaschinen A.-G.), Ger. 549,339 (1928) January 19.
- CG4. "Hydrogen by Catalytic Conversion of Hydrocarbon Gas," (assigned to Ges. Fur Linde's Eismaschinen A.-G.), Brit. 317,731 (1928) August 20.

- CG5. "Hydrogen From Gas Mixtures, Containing Hydrocarbons," P. Schuftan, (assigned to Ges. fur Linde's Eismaschinen A.-G.), U.S. 1,870,144 (1932) August 2.
- CG6. "Hydrogen," W. Gluud, K. Keller and R. Schofelder, Can. 284,298 (1928) October 30.
- CG7. "Hydrogen," W. Gluud, K. Keller, R. Schonfelder and W. Klempt, U.S. 1,816,523 (1931) July 28.
- CG8. "Hydrogen," H. E. F. Goold-Adams, Brit. 137,340 (1918) January 24.
- CG9. "Hydrogen," H. C. L. Gougnard, Can. 242,862 (1924) September 9.
- CG10. "Hydrogen," A. R. Griggs, Brit. 134,901 (1918) November 9.
- CG11. "Hydrogen," A. R. Griggs, Brit. 134,902 (1918) November 9.
- CG12. "Hydrogen," A. R. Griggs, Brit. 142,882 (1918) November 9.
- CG13. "Hydrogen," A. R. Griggs, Brit. 165,829 (1919) June 13.
- CG14. "Coking Process," A. R. Griggs, Brit. 469,834 (1937) August 4.
- CG15. "Hydrogen-Carbon Monoxide Mixture," E. M. Glazier, (assigned to Gulf Research & Development Co.), U.S. 2,694,047 (1954) November 9.
- CG16. "Synthesis Gas," J. H. Hirsch, (assigned to Gulf Research & Development Co.), U.S. 2,614,915 (1952) October 21.
- CG17. "Hydrogen," F. Gulker, Fr. 647,257 (1927) July 20.
- CH1. "Gas For Hydrogenation," A. J. E. Hans, Belg. 414,501 (1936) April 30.
- CH2. "Hydrogen," J. Harger, Brit. 147,235 (1918) April 2.
- CH3. "Hydrogen; Nitrogen; Carbon Dioxide," J. Harger and Lever Bros. Brit. 131,684 (1918) August 1.
- CH4. "Hydrogen and Hydrogen-Nitrogen Mixtures," J. Harger, (assigned to Wookcroft Manufacturing Co., Ltd.), Brit. 175,501 (1920) December 30.
- CH5. "Manufacture of Hydrogen, Nitrogen and Carbon Dioxide," J. Harger, Can. 231,936 (1923) June 12.
- CH6. "Hydrogen and Carbon Dioxide From Blast-Furnace Gases," F. Heyd, Fr. 676,196 (1929) June 5.
- CH7. "Gasification of Solid Fuels," O. Hubmann, U.S. 2,689,786 (1954) September 21.

- CH8. "Synthesis Gas Having a High Hydrogen Content," (assigned to Huettenwerk Oberhausen A.-G.), Fr. 1,561,525 (1969) March 28.
- CH9. "Hydrogen," J. A. Perry, (assigned to Humphreys & Glasgow, Ltd.), Brit. 370,289 (1930) August 30.
- CH10. "Gasification of Solid Fuels," M. G. Huntington, (assigned to Huntington Chemical Corp.), U.S. 3,088,816 (1963) May 7.
- CH11. "Hydrogen and Nitrogen," (assigned to Hydrazote), Fr. 645,970 (1927) December 20.
- CH12. "Gasification," J. C. Kalback, (assigned to Hydrocarbon Research, Inc.), U.S. 2,687,950 (1954) August 31.
- CH13. "Carbon Monoxide and Hydrogen From Heavy Oils," P. W. Garbo, (assigned to Hydrocarbon Research, Inc.), U.S. 2,821,465 (1958) January 28.
- CH14. "Coal-Fired Hydrogen Reformer," H. H. Stotler and M. Calderon, (assigned to Hydrocarbon Research, Inc.), S. African 70 03,441 (1970) November 24.
- CH15. "System Employing Coal as Fuel in a Steam Reformer," H. H. Stotler, (assigned to Hydrocarbon Research, Inc. and United States Dept. of the Interior), U.S. 3,551,123 (1970) December 29.
- CI1. "Production of Water Gas and Hydrogen," H. A. Humphrey, (assigned to Imperial Chemical Industries, Ltd.), Can. 281,814 (1918) July 17.
- CI2. "Water Gas and Hydrogen," (assigned to Imperial Chemical Industries, Ltd.), Fr. 649,780 (1928) February 9.
- CI3. "Carbon and Hydrogen From Water Gas, Etc.," T. Ewan, (assigned to Imperial Chemical Industries, Ltd.), Brit. 314,163 (1928) April 19.
- CI4. "Hydrogen," C. F. R. Harrison, (assigned to Imperial Chemical Industries, Ltd.), Brit. 332,571 (1929) April 19.
- CI5. "Hydrogen-Containing Gases," M. H. M. Arnold, (assigned to Imperial Chemical Industries, Ltd.), Brit. 578,323 (1946) July 9.
- CI6. "Hydrogen-Containing Gases," W. Stannage, (assigned to Imperial Chemical Industries, Ltd.), Brit. 639,554 (1950) June 28.
- CI7. "Synthesis Gas," T. J. P. Pearce, R. J. Morley and F. L. Clark, (assigned to Imperial Chemical Industries, Ltd.), Brit. 719,788 (1954) December 8.
- CI8. "Water Gas," E. J. Challis and T. J. P. Pearce, (assigned to Imperial Chemical Industries, Ltd.), Brit. 733,149 (1955) July 6.

- CI9. "Catalytic Manufacture of Hydrogen From Carbon Monoxide and Water Vapor," J. S. Campbell, P. Craven and P. Davies, (assigned to Imperial Chemical Industries, Ltd.), Ger. Offen. 2, 136, 746 (1972) April 6.
- CI10. "Gasification of Carbonaceous Fuels," F. W. Luerssen, (assigned to Inland Steel Co.), U.S. 2, 962, 367 (1960) November 29.
- CJ1. "Catalyst For Manufacture of Hydrogen," T. Namikawa, (assigned to Minister of Navy), Japan 129, 729 (1939) April 13.
- CJ2. "Hydrogen," G. F. Jaubert, Brit. 147, 519 (1920) July 8.
- CJ3. "Synthesis Gas," F. J. Jenny, Brit. 771, 060 (1957) March 27.
- CJ4. "Potassium Salt and Hydrogen From Peat," (assigned to Jun-ichi Kato), Japan. 172, 488 (1946) April 16.
- CK1. "Hydrogen," H. Keller, U.S. 1, 286, 650 (1919) December 3.
- CK2. "Hydrogen," (assigned to M. W. Kellogg Co.), Brit. 527, 242 (1940) October 4.
- CK3. "Generation of Hydrogen," (assigned to M. W. Kellogg Co.), Brit. 527, 243 (1940) October 4.
- CK4. "Converting Methane and Carbon Dioxide Into Hydrogen and Carbon Monoxide," E. W. Riblett, (assigned to M. W. Kellogg Co.), U.S. 2, 220, 849 (1941) November 5.
- CK5. "Gasification of Carbonaceous Solids and Synthesis of Organic Materials," N. L. Dickinson, (assigned to M. W. Kellogg Co.), U.S. 2, 602, 809 (1952) July 8.
- CK6. "Gasification of Coal," N. L. Dickinson, (assigned to M. W. Kellogg Co.), U.S. 2, 662, 007 (1953) December 8.
- CK7. "Hydrogen," W. Klempt, Ger. 533, 461 (1929) July 21.
- CK8. "Direct Gasification of High-Ash, Clinkering, Semiclinkering, and Longflame Coals," L. G. Koblents, U.S.S.R. 67, 254 (1965) February 26.
- CK9. "Production of Hydrogen or Gases Rich in it by Reduction of Steam With Materials Containing Iron," C. Kobow, G. Knauf, H. Martin, B. Wolf and J. Garstka, Ger. (East) 88, 784 (1972) March 20.
- CK10. "Gas Generator Using Oxygen and Coal Dust," S. Koizumi, Japan. 8480 ('55) (1958) November 21.
- CK11. "Ammonia," K. Koller and M. Lengyel, Ger. 559, 922 (1930) February 4.
- CK12. "Carbon Monoxide and Hydrogen For Synthesizing Hydrocarbons," H. Koppers, (assigned to Koppers Co.), U.S. 2, 132, 533 (1939) October 11.

- CK12. "Gases For Hydrocarbon Synthesis," M. Radtke, (assigned to Koppers Co.), U.S. 2,266,989 (19) December 23.
- CK13. "Gasification Apparatus With Metallic Water Jacket Nozzle For Steam," F. Totzek, (assigned to Koppers Co., Inc.), U.S. 2,751,286 (1956) June 19.
- CK14. "Gasification of Fuels," E. E. Donath, (assigned to Koppers Co., Inc.), U.S. 2,751,287 (1956) June 19.
- CK15. "Synthesis Gas and Coke," M. Josenhans, (assigned to Koppers Co., Inc.), U.S. 2,805,188 (1957) September 3.
- CK16. "Gasification of Finely Divided Carbonaceous Solid, Liquid, or Gaseous Fuel," (assigned to Koppers Co., Inc.), Brit. 811,603 (1958) April 8.
- CK17. "Producing Fuel Gas From Solid Carbonaceous Fuels, Oxygen, and Steam," F. Totzek, (assigned to Koppers Co., Inc.), U.S. 2,905,544 (1959) September 22.
- CK18. "Continuous Process For Generating Water Gas," (assigned to Heinrich Koppers G.m.b.H.), Ger. 739,738 (1943) August 19.
- CK19. "Gasification of Powdered Fuel," F. Totzek, (assigned to Heinrich Koppers G.m.b.H.), Ger. 927,225 (1955) May 2.
- CK20. "Gases Containing Carbon Monoxide and Hydrogen From Powdered Fuels," W. Linder, (assigned to Heinrich Koppers G.m.b.H.), Ger. 927,224 (1955) May 2.
- CK21. "Gasification of Finely Divided Fuels," K. H. Osthaus, (assigned to Heinrich Koppers G.m.b.H.), Ger. 1,022,736 (1958) January 16.
- CK22. "Manufacture of Hydrogen-Rich Gases by Conversion of Carbon Monoxide," P. Diemer and H. Besteck, (assigned to Heinrich Koppers G.m.b.H.), Ger. 1,247,280 (1967) August 17.
- CK23. "Hydrogen-Carbon Monoxide Mixtures," (assigned to Heinrich Koppers' Industrielle Maatschappij N.V.), Fr. 810,012 (1937) March 13.
- CK24. "Water-Gas Plant," (assigned to Heinrich Koppers' Industrielle Maatschappij N.V.), Brit. 466,737 (1937) June 3.
- CL1. "Hydrogen From Carbon Monoxide and Steam," A. T. Larson, (assigned to Lazote, Inc.), Brit. 311,737 (1928) May 15.
- CL2. "Hydrogen," J. S. Beekley, (assigned to The Lazote, Inc.), Can. 284,584 (1928) November 6.
- CL3. "Hydrogen," R. Williams, (assigned to The Lazote, Inc.), Can. 284,585 (1928) November 6.

- CL4. "Hydrogen," F. C. Blake, (assigned to Lazote, Inc.), U.S. 1,692,811 (1929) November 27.
- CL5. "Generator For Hydrogen and Carbon Dioxide," L. Leibovici, Fr. 722,644 (1931) August 29.
- CL6. "Carbon Monoxide and Hydrogen," T. Lichtenberger and L. Kaiser, Fr. 812,376 (1937) May 8.
- CL7. "Hydrogen," E. M. D. Eborall, W. A. Baker and E. A. G. Liddiard, (assigned to Edwin A. G. Liddiard), U.S. 2,623,812 (1952) December 30.
- CL8. "Gas," F. G. Liljenroth, Brit. 189,789 (1922) November 29.
- CL9. "Production of Hydrogen For Ammonia Synthesis," F. G. Liljenroth, Swed. 53,521 (1923) March 28.
- CL10. "Production of Hydrogen or Mixtures of Hydrogen and Nitrogen," F. G. Liljenroth, Swed. 55,589 (1923) December 12.
- CL11. "Converting Hydrocarbon Gas to Carbon Monoxide and Hydrogen," E. Karwat, (assigned to Linde Air Products Co.), U.S. 2,170,265 (1940) August 22.
- CL12. "Carbon Monoxide-Hydrogen Mixtures," M. Steinschlaeger, (assigned to London Testing Laboratory Ltd.), Brit. 513,778 (1939) October 23.
- CL13. "Installation For Producing Hydrogen by the Contact Method," A. P. Loshkarev and E. M. Petrov, Russ. 26,698 (1931) March 30.
- CL14. "Hydrogen," (assigned to L' Oxhydrique Francaise), Brit. 199,364 (1923) April 30.
- CL15. "Hydrogen," (assigned to L' Oxhydrique Francaise), Brit. 206,822 (1923) October 17.
- CL16. "Production of Hydrogen," S. A. Guerrieri, (assigned to Lummus Co.), U.S. 3,392,000 (1968) July 9.
- CM1. "Hydrogen," T. D. Mackie, Brit. 124,798 (1916) April 5.
- CM2. "Hydrogen," F. Hansgirg, (assigned to Magnesium Metals Corp.), U.S. 1,836,919 (1932) December 15.
- CM3. "Hydrogen From Low-Grade Gas With Utilization of the Multiple Reflux Column on Alternated Plates," P. E. R. Marcon, Ital. 423,065 (1947) July 3.
- CM4. "The Synthesis of Ammonia," G. Martin-Wedard, Fr. 847,838 (1939) October 17.
- CM5. "Synthesis Gas," O. Herwig, (assigned to Maschinenfabrik Augsburg-Nurnberg, Akt. -Ges.), U.S. 2,909,416 (1959) October 20.

- CM6. "Use of Hydrogen For Cooling Steam Turbo-Generator Sets," (assigned to Maschinenfabrik Oerlikon), Brit. 297,109 (1927) September 15.
- CM7. "Carbon Monoxide-Hydrogen Mixture," H. Mauras, Fr. 1,256,572 (1961) March 24.
- CM8. "Hydrogen," E. B. Maxted and G. R. Ridsdale, Brit. 12,698 (1915) September 4.
- CM9. "Activator For Chemical Processes," E. B. Maxted and G. R. Ridsdale, Brit. 127,025 (1917) March 17.
- CM10. "Nitrogen; Hydrogen," E. B. Maxted and T. A. Smith, Brit. 114,663 (1917) April 12.
- CM11. "Producing Hydrogen by Alternate Reduction of Iron Oxide and Reoxidation by Steam," E. B. Maxted and G. R. Ridsdale, Dan. 22,122 (1917) May 7.
- CM12. "Hydrogen," E. B. Maxted, U.S. 1,253,622 (1918) January 15.
- CM13. "Hydrogen From Reaction Between Steam and Iron," E. B. Maxted, U.S. 1,438,387 (1923) December 12.
- CM14. "Pure Hydrogen," D. Maxtett, Jap. 30,426 (1916) December 1.
- CM15. "Hydrogen and Nitrogen or Mixtures of These Gases From Steam and Air and Iron," A. Messerschmitt, Ger. 291,603 (1913) August 7.
- CM16. "Producing Hydrogen," A. Messerschmitt, U.S. 1,225,262,1,225,264 (1917) May 8.
- CM17. "Producing Hydrogen," A. Messerschmitt, U.S. 1,225,263 (1917) May 8.
- CM18. "Hydrogen," M. Messerschmidt, Ger. 680,786 (1939) August 17.
- CM19. "Hydrogen," A. Messerschmitt, Ger. 290,869 (1919) June 14.
- CM20. "Effecting Catalytic Reactions Between Gases or Vapors," (assigned to Metallges A.-G.), Ger. 529,067 (1927) December 25.
- CM21. "Synthesis Gas Also Useful as Fuel Gas," O. Dorschner, (assigned to Metallgesellschaft Akt.-Ges.), Ger. 901,052 (1954) January 7.
- CM22. "Hydrogen by Reaction of Carbon Monoxide-Containing Gases With Water Vapor," R. Bayer, (assigned to Metallgesellschaft A.-G.), Brit. 718,796 (1954) November 17.
- CM23. "Simultaneous Preparation of Finely Dispersed Alumina and Hydrogen," H. Clasen, (assigned to Metallgesellschaft Akt.-Ges.), Ger. 956,943 (1957) January 24.

- CM24. "Synthesis Gas Containing Carbon Monoxide and Hydrogen," R. Paul and E. Kapp, (assigned to Metallgesellschaft A. -G.), Ger. Offen. 2,202,165 (1973) July 26.
- CM25. "Production of Carbon Monoxide and Hydrogen From Solid Carbonaceous Fuels," G. Baron, E. Kapp, H. Dernbach, F. Bieger and R. Kohlen, (assigned to Metallgesellschaft A. -G. and Ruhrgas A. -G.), U.S. 3,540,867 (1970) November 17.
- CM26. "Hydrogen," F. Meyer and T. Lichtenberger, Ger. 478,985 (1927) March 22.
- CM27. "Carbon Monoxide and Hydrogen," H. Michalski, Brit. 226,500 (1923) December 17.
- CM28. "Hydrogen," R. Abe, (assigned to Minami Mansyutesudo K. K.), Japan 132,307 (1939) September 27.
- CM29. "Hydrogen," A. Mittasch, U.S. 1,301,151 (1919) April 22.
- CM30. "Continuous Preparation and Conversion of Water Gas Into Synthesis Gas," (assigned to Montecatini), Ital. 439,334 (1948) September 16.
- CM31. "Nitrogen-Hydrogen Mixtures For Ammonia Synthesis," (assigned to "Montecatini" Soc. generale per l'industria mineraria ed agricola), Austrian 149,337 (1937) April 26.
- CN1. "Production of Hydrogen From Steam and Metals," W. Naher and M. Noding, Ger. 279,726 (1914) November 10.
- CN2. "Hydrogen," W. Naher and M. Noding, Ger. 286,960 (1915) August 28.
- CN3. "Gaseous Mixtures," J. L. Strevens, (assigned to The National Coke & Oil Co. Ltd.), Brit. 480,820 (1938) March 1.
- CN4. "Hydrogen," G. Natta, Fr. 774,308 (1934) December 5.
- CN5. "Hydrogen From Water-Gas," G. Natta, Ger. 630,963 (1936) June 9.
- CN6. "Apparatus for Manufacture of Hydrogen and Carbon Dioxide From Carbon Monoxide," T. Hidaka, S. Nakayo, H. Kato and H. Kurihara, (assigned to Nissan Chemical Industries, Ltd.), Japan. 9020 ('56) (1958) October 22.
- CN7. "Gasification of Fuels by Double Turbulent-Zone Fluidization," N. Takada, K. Miyamoto, T. Suzuki, S. Takahashi and Y. Ikeda, (assigned to Nitto Chemical Industry Co.), Japan. 175('58) (1959) January 18.
- CN8. "Iron and Fuel Gas Simultaneous Manufacture," K. Sasaki, K. Miyamoto, Y. Yamanaka, S. Takahashi and Y. Ikeda, (assigned to Nitto Chemical Industry Co., Ltd.), Japan. 10,108 ('60) (1962) July 28.

- CN9. "Sodium Bicarbonate; Hydrogen," (assigned to Nitrogen Corporation), Brit. 158,863 (1920) September 2.
- CN10. "Formation of Low-Volatile Char and Synthesis Gases by the Carbonization of Coal," R. L. Savage, (assigned to North American Coal Corp.), U.S. 3,061,524 (1962) October 30.
- CN11. "Synthesis Gas," (assigned to North American Coal Corp.), Fr. 1,343,822 (1963) November 22.
- CN12. "Gaseous Reactions," J. E. Nyrop, Dan. 54,170 (1938) January 17.
- CO1. "Hydrogen," W. Gluud and W. Klempt, (assigned to Johann Sebastian Ohlendieck-Dolge), Ger. 553,233 (1927) August 17.
- CO2. "Hydrogen," (assigned to Osterreichisch Amerikanische Magnesit A.-G.), Brit. 355,861 (1929) June 18.
- CO3. "Hydrogen and Carbon Dioxide," (assigned to Osterreichisch Amerikanische Magnesit A.-G.), Austrian 142,214 (1935) June 25.
- CO4. "Hydrogen," (assigned to Osterreichisch Amerikanische Magnesit A.-G.), Austrian 149,657 (1937) May 25.
- CO5. "Synthesis Gas," F. Leithe and R. Mewes, (assigned to Dr. C. Otto & Co. G.m.b.H.), Ger. 916,662 (1954) August 16.
- CO6. "Production of Gas Containing High Percentages of Hydrogen and Carbon Monoxide," (assigned to Dr. C. Otto, und Co., G.m.b.H.), Brit. 1,155,584 (1969) June 18.
- CO7. "Gas Mixtures Containing Carbon Monoxide and Hydrogen," M. Steinschlaeger, (assigned to Overseas Finance & Commerce (London) Ltd.), Brit. 575,377 (1946) February 15.
- CP1. "Synthesis Gas," V. F. Parry, U.S. 2,539,466 (1951) January 30.
- CP2. "Hydrogen," C. E. Parsons, U.S. 1,658,939 (1928) February 14.
- CP3. "Hydrogen From Steam and Carbon Monoxide," G. L. E. Patart, Brit. 228,153 (1924) January 21.
- CP4. "Gasification of Carbonaceous Matter," A. A. J. K. Eskreis and W. Buse, (assigned to C. D. Patents, Ltd.), Brit. 692,732 (1953) June 10.
- CP5. "Synthesis-Gas Production in an Underground Cavity," F. E. Gilmore, (assigned to Phillips Petroleum Co.), U.S. 3,024,097 (1962) March 6.
- CP6. "Hydrogen," (assigned to Pintsch-Bamag Akt.-Ges.), Brit. 859,254 (1961) January 18.

- CP7. "Conversion of Carbon Monoxide or Gas Containing Carbon Monoxide," (assigned to Pintsch Bamag A.-G.), Fr. 1,363,708 (1964) June 12.
- CP8. "Gasification of Carbonaceous Solids," E. H. Reichl and R. V. Safford, (assigned to Pittsburgh Consolidation Coal Co.), Brit. 658,542 (1951) October 10.
- CP9. "Gasification Electrochemical System," E. Gorin, (assigned to Pittsburgh Consolidation Coal Co.), U.S. 2,581,651 (1952) January 8.
- CP10. "Gasification of Carbonaceous Solid Fuels," E. Gorin, (assigned to Pittsburgh Consolidation Coal Co.), U.S. 2,654,661 (1953) October 6.
- CP11. "Water-Gas Generator," (assigned to Gunter Plathner), Ger. 809,334 (1951) October 8.
- CP12. "Carbon Monoxide Conversion," G. Pohle, L. Lenz and I. Hacker, Ger. (East) 64,044 (1968) October 5.
- CP13. "Hydrogen," A. T. Grisenthwaite, (assigned to The Power-Gas Corp. Ltd.), Brit. 542,511 (1941) January 13.
- CP14. "Hydrogen," R. W. Rutherford and A. T. Grisenthwaite, (assigned to The Power-Gas Corp. Ltd.), Brit. 538,348 (1941) July 30.
- CP15. "Hydrogen," A. T. Grisenthwaite and F. F. Rixon, (assigned to The Power-Gas Corp. Ltd.), Brit. 543,626 (1942) March 5.
- CP16. "Hydrogen," N. E. Rambush and R. W. Rutherford, (assigned to The Power Gas Corp. Ltd.), Brit. 546,177 (1942) July 1.
- CP17. "Hydrogen," R. W. Rutherford and A. T. Grisenthwaite, (assigned to The Power-Gas Corp. Ltd.), Brit. 548,183 (1942) September 29.
- CP18. "Hydrogen," A. T. Grisenthwaite and K. Ruschin, (assigned to The Power-Gas Corp. Ltd.), Brit. 548,397 (1942) October 8.
- CP19. "Hydrogen-Nitrogen Mixtures," R. W. Rutherford and F. F. Rixon, (assigned to The Power-Gas Corp. Ltd.), Brit. 586,650 (1947) March 26.
- CP20. "Ammonia Synthesis Gas," A. T. Grisenthwaite and K. Ruschin, (assigned to The Power-Gas Corp. Ltd.), Brit. 685,962 (1953) January 14.
- CP21. "Hydrogen," H. J. Prins, Brit. 128,273 (1917) July 9.
- CP22. "Hydrogen Production From Sulfur-Containing Carbon Monoxide and Steam," (assigned to Pullman Inc.), Neth. Appl. 6,411,502 (1965) April 5.
- CP23. "Shift Conversion Catalytic Manufacture of Hydrogen From Carbon Monoxide and Steam," J. A. Finneran, Jr. and L. C. A elrod, (assigned to Pullman Inc.), U.S. 3,345,136 (1967) October 3.

- CP24. "Oxidation of Carbonaceous Materials," P. A. Lefrancois and K. A. Barclay, (assigned to Pullman Inc.), S. African 69 05, 571 (1970) February 25.
- CR1. "Conversion Gas," (assigned to Regie nationale des usines Renault), Fr. 985,710 (1951) July 23.
- CR2. "Alcohols, Aldehydes, Ketones, Hydrocarbons and Hydrogen From Vegetable Substances," E. L. Rinman, Brit. 334,724 (1929) July 16.
- CR3. "Alcohols, Aldehydes, Ketones, Hydrocarbons and Hydrogen From Decomposition of Vegetable Substances," E. L. Rinman, Ger. 557,445 (1929) August 13.
- CR4. "Alcohols, Aldehydes, Ketones and Hydrogen From Vegetable Substances," E. L. Rinman, Brit. 353,665 (1930) May 26.
- CR5. "Hydrogen: Wood Distillation," E. L. Rinman, Brit. 450,416 (1936) July 17.
- CR6. "Nitrogen-Hydrogen Mixtures," H. Ritter, W. Glud, W. Klempt and R. Bestehorn, Ger. 652,248 (1937) October 28.
- CR7. "Gasification of Solid Fuel," I. Roberts, U.S. 2,782,109 (1957) February 19.
- CR8. "Hydrogen," J. Rochet, Can. 254,162 (1925) September 29.
- CR9. "Hydrogen," W. P. Rogers, Brit. 249,925 (1925) January 1.
- CR10. "Hydrogen," W. P. Rogers, Brit. 251,449 (1925) May 29.
- CR11. "Hydrogen by Reaction of Steam With Iron," W. P. Rogers, Brit. 344,043 (1929) November 29.
- CR12. "Hydrogen," (assigned to Ruhrchemie A.-G.), Ger. 657,067 (1938) February 23.
- CR13. "Catalysts for Manufacture of Hydrogen by Decomposition of Gases Containing Carbon Monoxide," O. Roelen, (assigned to Ruhrchemie A.-G.), Ger. 868,596 (1953) February 26.
- CR14. "Catalytic Agents," (assigned to Rutgerswerke A.-G.), Brit. 421,963 (1935) January 2.
- CS1. "Utilization of Compression and Reaction Heat in Catalytical Pressure Conversion of Carbon Monoxide With Steam," J. Sadilek, J. Tauta and O. Zajic, Czech. 128,820 (1968) August 15.
- CS2. "Hydrogen," K. Schaefer, Ger. 291,022 (1913) July 15.
- CS3. "Hydrogen Generator," K. Schaefer, Ger. 289,208 (1915) December 9.
- CS4. "Hydrogen Generator," K. Schaefer, Ger. 290,529 (1916) March 2.

- CS5. "Hydrogen," K. Schaefer, Ger. 291,022 (1916) April 6.
- CS6. "Hydrogen," H. Schmalfeldt, Ger. 646,915 (1937) June 23.
- CS7. "Nitrogen Compounds," E. Schwarzenauer, Ger. 514,393 (1926) September 7.
- CS8. "Hydrogen," F. T. Snyder, U.S. 1,781,935 (1931) November 18.
- CS9. "Residual Gases From the Manufacture of Hydrogen," (assigned to Soc. Des Mines De Dourges), Fr. 706,504 (1930) February 28.
- CS10. "Residual Gases From the Manufacture of Hydrogen," (assigned to Soc. Des. Mines De Dourges), Fr. 41,945 (1933) May 3.
- CS11. "Lampblack and Hydrogen," (assigned to Soc D'Etudes Et Realisation Dite Ereal), Brit. 342,034 (1928) November 23.
- CS12. "Hydrogen," M. C. Sacchi, Ger. 544,958 (1927) August 5.
- CS13. "Liquefaction and Rectification System for Producing Hydrogen From Gas Mixtures Such as Coke-Oven Gas), G. Claude, (Soc. lair liquide), U.S. 1,870,096 (1932) August 2.
- CS14. "Hydrogen," (assigned to Societe Ammonia), Ger. 529,523 (1924) November 19.
- CS15. "Hydrogen From Water Gas," (assigned to Societa Anon. Brevetti Cicall), Brit. 291,409 (1927) June 1.
- CS16. "Gas Suitable for Chemical Syntheses," (assigned to Societa anon. Forni ed Impianti industriali), Brit. 633,718 (1949) December 19.
- CS17. "Hydrogen Production With Use of Bituminous Fuel Such as Coal," D. C. Bardwell and F. Porter, (assigned to Solvay Process Co.), U.S. 2,135,693 (1939) November 8.
- CS18. "Catalyst for use in Hydrogen Production," V. M. Stowe, (assigned to Solvay Process Co.), Can. 407,876 (1942) October 6.
- CS19. "Catalyst for Production of Hydrogen," V. M. Stowe, (assigned to The Solvay Process Co.), U.S. 2,364,562 (1944) March 5.
- CS20. "Producing Hydrogen From Carbon Monoxide," A. M. Squires, U.S. 3,355,249 (1967) November 28.
- CS21. "Calcium Carbide," (assigned to Stemicarbon N. V.), Brit. 727,497 (1955) April 6.
- CS22. "Hydrogen-Nitrogen Mixtures From Coke-Oven Gas," P. J. Haringhuizen (assigned to Stamicarbon N. V.), Ger. 1,014,136 (1957) August 22.

- CS23. "Hydrogen From Gaseous Mixtures," G. Ritter and E. Ufer, (assigned to Standard-I. G. Co.), U.S. 1,869,825 (1932) August 2.
- CS24. "Hydrogen," (assigned to Standard Oil Development Co.), Brit. 586,914 (1947) April 8.
- CS25. "Hydrogen-Containing Gas," (assigned to Standard Oil Development Co.), Brit. 616,710 (1949) January 26.
- CS26. "Hydrogen," (assigned to Standard Oil Development Co.), Brit. 628,417 (1949) August 29.
- CS27. "Producing a Carbon Monoxide and Hydrogen Gas Mixture From Carbonaceous Materials," W. F. Rollman, (assigned to Standard Oil Development Co.), U.S. 2,527,197-8 (1950) October 24.
- CS28. "Gas Manufacture," (assigned to Standard Oil Development Co.), Brit. 680,545 (1952) October 8.
- CS29. "Synthesis Gas," W. A. Herbst, (assigned to Standard Oil Development Co.), U.S. 2,631,933 (1953) March 17.
- CS30. "Synthesis Gas," M. C. K. Jones, (assigned to Standard Oil Development Co.), U.S. 2,640,034 (1953) May 26.
- CS31. "Combustible Gas," W. W. Odell, (assigned to Standard Oil Development Co.), U.S. 2,681,273 (1954) June 15.
- CS32. "Producing Hydrogen-Carbon Monoxide Mixtures," E. A. Johnson, (assigned to Standard Oil Co. of Indiana), U.S. 2,482,187 (1949) September 20.
- CS33. "Hydrogen," J. F. Coffey, (assigned to Standard Oil Co. of Indiana), U.S. 2,538,235 (1951) January 16.
- CS34. "Processing Carbonaceous Solids," M. H. Arveson, (assigned to Standard Oil Co. of Indiana), U.S. 2,560,403 (1951) July 10.
- CS35. "Hydrogen," L. W. Russum and J. F. Coffey, (assigned to Standard Oil Co. of Indiana), U.S. 2,609,274 (1952) September 2.
- CS36. "Synthesis Gas," E. L. D'Ouille, (assigned to Standard Oil Co. of Indiana), U.S. 2,635,952 (1953) April 21.
- CS37. "Gas Mixtures Containing Carbon Monoxide and Hydrogen," M. Steinschlaeger, Brit. 573,923 (1945) December 13.
- CS38. "Gas Mixtures Containing Carbon Monoxide and Hydrogen," M. Steinschlaeger, Brit. 574,048 (1945) December 19.
- CS39. "Synthesis Gas," M. Steinschlaeger, Brit. 744,857 (1956) February 15.

- CS40. "Gas Manufacture," E. E. Stimson, Brit. 554,869 (1943) July 22.
- CS41. "Hydrogen," S. Kodama and S. Makino, (assigned to Sumitomo Kagaku Kogyo K. K.), Japan 133,467 (1939) November 24.
- CS42. "Water Gas, Methanol and Hydrogen," H. A. Humphrey, (assigned to Synthetic Ammonia Nitrates, Ltd.), Brit. 282,573 (1927) February 22.
- CT1. "Hydrogen," H. S. Taylor and E. K. Rideal, U.S. 1,411,760 (1922) April 4.
- CT2. "Carbon Monoxide Production From Solid Fuels," C. R. Carkeek and F. E. Guptill, Jr., (assigned to Texaco Inc.), U.S. 2,987,387 (1961) June 6.
- CT3. "Flow-Type Coal Gasifier," D. Eastman and B. H. Sage, (assigned to Texaco Inc.), U.S. 3,000,711 (1961) September 19.
- CT4. "Coal Gasification," W. G. Schlinger, W. L. Slater, (assigned to Texaco Inc.), U.S. 3,544,291 (1970) December 1.
- CT5. "Catalytic, Water-Gas Shift Conversion Process for Producing Hydrogen," W. L. Slater, J. R. Muenger, W. G. Schlinger and A. M. Robin, (assigned to Texaco Inc.), U.S. 3,595,619 (1971) July 27.
- CT6. "High-Pressure, Continuous, Catalytic, Water-Gas Shift Conversion Process," A. M. Robin and J. P. Tassoney, (assigned to Texaco Inc.), U.S. 3,652,454 (1972) March 28.
- CT7. "Gasification of Carbonaceous Fuel," A. D. Garrison, (assigned to Texaco Development Corp.), U.S. 2,516,974 (1950) August 1.
- CT8. "Synthesis Gas," H. V. Rees, (assigned to Texaco Development Corp.), U.S. 2,552,737 (1951) May 15.
- CT9. "Recovery of Uranium From Fossil Fuels," C. F. Teichmann, (assigned to Texaco Development Corp.), U.S. 3,000,696 (1956) July 27.
- CT10. "Production of Fuel Gas From Carbonaceous Solid Fuels," (assigned to Texaco Development Corp.), Ger. 1,034,804 (1958) July 24.
- CT11. "Hydrogen Production From Carbon Monoxide and Steam," P. L. Paull, (assigned to Texaco Development Corp.), U.S. 2,892,685 (1959) June 30.
- CT12. "Synthesis or Fuel Gases," D. Eastman, L. P. Gaucher and C. Carkeek, (assigned to Texaco Development Corp.), Ger. 1,068,415 (1959) November 5.
- CT13. "Synthesis Gas," T. H. Whaley, (assigned to Texaco Development Corp.), U.S. 2,946,670 (1960) July 26.

- CT14. "Generation of Carbon Monoxide and Hydrogen-Containing Fuel Gas," C. R. Carkeek, (assigned to Texaco Development Corp.), Ger. 1,135,123 (1962) August 23.
- CT15. "Production of Carbon Monoxide and Hydrogen," B. H. Sage and D. Eastman, (assigned to Texaco Development Corp.), Ger. 1,217,014 (1966) May 18.
- CT16. "Synthesis Gas From Solid Carbonaceous Fuels by Partial Oxidation With an Oxygen-Containing Gas," W. G. Schlinger and W. L. Slater, (assigned to Texaco Development Corp.), Brit. 1,259,425 (1972) January 5.
- CT17. "Hydrogen From Carbon Monoxide and Water," (assigned to Texaco Development Corp.), Fr. 2,135,797 (1973) January 26.
- CT18. "Carbon Monoxide and Hydrogen From Powdered Coal," L. P. Gaucher, (assigned to Texas Co.), U.S. 2,558,746 (1951) July 3.
- CT19. "Production of Fuel Gas From Carbonaceous Solid Fuels," D. Eastman, (assigned to Texas Co.), U.S. 2,595,234 (1952) May 6.
- CT20. "Synthesis Gas Generation," F. H. Moore, (assigned to Texas Co.), U.S. 2,655,443 (1953) October 13.
- CT21. "Carbon Monoxide and Hydrogen by Underground Gasification of Coal," E. F. Pevere and H. V. Hess, (assigned to Texas Co.), U.S. 2,788,956 (1957) April 16.
- CT22. "Gasification of Carbonaceous Fuels," C. R. Carkeek and D. M. Strasser, (assigned to Texas Co.), U.S. 2,838,388 (1958) June 10.
- CT23. "Ammonia Synthesis Gas," W. M. Stratford, (assigned to Texas Co.), U.S. 2,838,460 (1958) June 10.
- CT24. "Gasification of Solid Fuels," D. Eastman, (assigned to Texas Co.), U.S. 2,871,114 (1959) January 27.
- CT25. "Fuel Gas Containing Carbon Monoxide," H. D. Textor, Ger. 1,039,179 (1958) September 18.
- CT26. "Heat Accumulators for Hydrogen Generators," A. M. Thomsen, U.S. 2,879,139 (1959) March 24.
- CT27. "Hydrogen," C. T. Thorssel and H. L. R. Lunden, Brit. 119,591 (1918) January 9.
- CT28. "Gas Reactions," Y. Tanaka, (assigned to Toa Kako Kabushiki Kaisha), Ger. 1,151,490 (1963) July 18.
- CT29. "Hydrogen," C. Toniolo and Dr. Rossi, Brit. 152,975 (1919) December 24.
- CT30. "Transformation of Carbon Monoxide Into Hydrogen and Carbon Dioxide," K. Yamadori, (assigned to Tsunemi Sato), Japan. 7715('51) (1952) December 18.

- CT31. "Conversion of Carbon Monoxide Into Hydrogen and Carbon Dioxide," (assigned to Tsunemi Sato), Japan. 6122 ('54) (1956) September 25.
- CT32. "Recovery of Hydrogen From Steam," J. H. Tyler. Can. 314,774 (1931) September 1.
- CU1. "Hydrogen," (assigned to Union Chimique Belge, Soc. Anon.), Brit. 343,172 (1929) June 22.
- CU2. "Hydrogen," H. C. Reed and C. H. O. Berg, (assigned to Union Oil of California), U.S. 2,635,947 (1953) April 21.
- CU3. "Hydrogen," D. M. Fenton, (assigned to Union Oil Co. of California), U.S. 3,490,872 (1970) January 20.
- CU4. "Production of Hydrogen From Carbon Monoxide and Water Under Liquid Phase Reaction Conditions in the Presence of a Basic Nitrogen Compound," D. M. Fenton, (assigned to Union Oil Co. of California), U.S. 3,539,298 (1970) November 10.
- CU5. "Gasifying Combustible Materials," R. Rummel and R. Huttner, (assigned to Union Rheinische Braunkohlen Kraftstoff A.-G.), U.S. 2,848,473 (1958) August 19.
- CU6. "Gasification of Solid Fuels," (assigned to Union Rheinische Braunkohlen Kraftstoff Akt.-Ges.), Brit. 820,213 (1959) September 16.
- CU7. "Hydrocarbon-Synthesis Gas From Coal," M. A. Elliott, E. L. Clark and H. H. Storch, (assigned to U.S. Dept. of Interior), U.S. 2,634,286 (1953) April 7.
- CU8. "Mixtures of Hydrogen, Carbon Monoxide, and Methane," H. E. Benson and J. H. Field, (assigned to U.S. Dept. of Interior), U.S. 3,031,287 (1962) April 24.
- CU9. "Synthesis Gas Production From Flue Gases," R. G. Auger, (assigned to United States Steel Corp.), Ger. Offen. 1,811,559 (1969) June 26.
- CW1. "Hydrogen; Carbon Dioxide," J. H. West and C. B. Tully, Brit. 188,494 (1921) October 13.
- CW2. "Hydrogen; Gas Producers," J. H. West, A. Jaques and C. B. Tully, Brit. 195,798 (1922) January 19.
- CY1. "Production of Ammonia Synthesis Gas," O. Keiji and H. Tatsuji, (assigned to Yokoyama Engineering Co., Ltd.), Japan. 69 21 417 (1969) September 12.
- CY2. "Simultaneous Production of Carbon Oxides and Hydrogen," D. Yu. Gamburg and B. L. Sarychev, U.S.S.R. 111,174 (1957) June 25.
- CZ1. "Conversion of Carbon Monoxide and Steam to Carbon Dioxide and Hydrogen," W. Zeigner, Ger. (East) 17,727 (1959) October 20.

SYNTHETIC FUELS

- FB1. "Hydrogen," H. Rabe and H. Lohmeyer, (assigned to Badische Anilin- & Soda-Fabrik Akt.-Ges.), Ger. 877,746 (1953) May 26.
- FB2. "Decomposing Hydrocarbons," (assigned to Bayerische Stickstoff-Werke A.-G.), Fr. 816,165 (1937) August 2.
- FB3. "Carbon and Hydrogen," (assigned to Bayerische Stickstoff-Werke A.-G.), Fr. 834,031 (1938) November 9.
- FB4. "Hydrogen Production For Fuel Cells," J. P. Bocard, R. L. Harvin and B. J. Mayland, U.S. 348,944 (1969) September 30.
- FB5. "Hydrogen For Fuel Cells," H. Reber, (assigned to Bosch, Robert, G.m.b.H.), Ger. Offen. 2,160,811 (2973) June 20.
- FB6. "Catalytic Cracking of Methanol," R. D. Holmes and A. R. Thornhill, (assigned to British Petroleum Co. Ltd.), Belg. 646,977 (1964) October 23.
- FB7. "Carbon Dioxide-Hydrogen Mixtures," P. D. Holmes and A. R. Thornhill, (assigned to British Petroleum Co. Ltd.), Fr. 1,391,625 (1965) March 5.
- FC1. "Conversion Products of Ethanol," W. O. Herrmann, (assigned to Chem. Forschungsges. m.b.H.), Ger. 615,073 (1935) June 26.
- FD1. "Hydrogen," A. T. Larson, (assigned to E. I. du Pont de Nemours & Co.), U.S. 2,425,625 (1947) August 12.
- FF1. "Catalytic Production of Hydrogen From Hydrocarbons," R. Huettner and G. Wietzel, (assigned to I.G. Farbenind A.-G.), U.S. 2,038,566 (19) April 28.
- FG1. "Combustible Gas Enriched With Methane," J. E. Davis and H. Stanier, (assigned to Gas Council), Brit. 798,741 (1958) July 23.
- FG2. "Treating Gases Electrically; Acetylene; Hydrogen," F. Gros. Brit. 211,125 (1924) February 2.
- FG3. "Carbon and Hydrogen From Gases Such as Acetylene," (assigned to C. Hostmann-Steinberg'-Chemische Farbenfabriken Ges.), Brit. 341,235 (1929) September 12.
- FH1. "Apparatus For Producing Carbon and Hydrogen by Splitting Acetylene," (assigned to Hydrocarbon Akt.-Ges. Fur Chemische Produkte), Brit. 267,963 (1926) March 20.
- FI1. "Hydrogen-Carbon Dioxide Mixtures," M. Prigent and A. Sugier, (assigned to Institut Francais du Petrole, des Carburants et Lubrifiants), Fr. 1,549,201 (1968) December 13.

- FI2. "Fuel Cell Connected With a Hydrogen Generator," C. Dezael and M. Prigent, (assigned to Institute Francais du Petrole, des Carburants et Lubrifiants), Fr. 1, 549, 206 (1968) December 13.
- FI3. "Production of a Gas With Enhanced Hydrogen Content," C. Dezael and M. Prigent, (assigned to Institute Francais du Petrole, des Carburants et Lubrifiants), Ger. Offen. 1, 957, 293 (1970) June 11.
- FJ1. "Preparation of Hydrogen of High Purity From Methanol," K. Uemoto and T. Yanagihara, (assigned to Japan Gasoline Co., Ltd.), Japan. Kokai 73 15, 786 (1973) February 28.
- FM1. "Hydrogenation of Fats and Oils," M. Matsunaga, Japan 35, 928 (1920) March 6.
- FM2. "Steam Reforming of Hexane With Crystalline Aluminosilicate Catalysts," W. K. Leaman, C. J. Plank and E. J. Rosinski, (assigned to Mobil Oil Corp.), U.S. 3, 523, 772 (1970) August 11.
- FR1. "Gas Mixts, Consisting Chiefly of Hydrogen and Carbon Monoxide," K. Alfons, (assigned to Reuttener Textilwerke Akt. -Ges.), Austrian 168, 609 (1951) July 10.
- FR2. "Reforming Isobutyraldehyde," J. Falbe, (assigned to Ruhrchemie A. -G.), S. African 69 01, 537 (1969) September 10.
- FS1. "Reforming Apparatus and Procedure For Producing Hydrogen," (assigned to Siemens A. -G.), Fr. 1, 595, 987 (1970) July 24.
- FT1. "Hydrogen Generation and Purification," M. D. Bowen and J. T. Hamrick, (assigned to Thompson Ramo Wooldridge Inc.), U.S. 3, 179, 500 (1965) April 20.
- FU1. "Reforming Equipment For Preparation of Pure Hydrogen," (assigned to Union Carbide Corp.), Neth. Appl. 6, 414, 753 (1965) June 21.
- FU2. "Hydrogen Generator," (assigned to Union Carbide Corp.), Neth. Appl. 6, 414, 748 (1965) June 21.
- FU3. "Cracking and Polymerization of Hydrocarbons in Neutronic Reactors," L. T. McClinton, W. M. Garrison and M. Burton, (assigned to U.S. of America, as represented by the Atomic Energy Commission), U.S. 2, 743, 223 (1956) April 24.
- FU4. "Irradiation in the Conversion of Pentane and Mineral Oil," A. O. Allen and J. M. Caffrey, Jr., (assigned to U.S. Atomic Energy Commission), U.S. 2, 955, 997 (1960) October 11.
- FV1. "Simultaneous Production of Hydrogen and Oxygen Gases," A. Basch and H. H. Von Doehren, (assigned to Varta A. -G.), U.S. 3, 607, 066 (1971) September 21.

THERMOCHEMICAL HYDROGEN PRODUCTION

- TA1. "Hydrogen," A. R. Miller and H. Jaffe, (assigned to Aerojet-General Corp.), U.S. 3,490,871 (1970) January 20.
- TB1. "Generating Hydrogen or a Hydrogen-Rich Gas," K. Betsch, G. Knauf, C. Kobow, M. Heinz, P. Dieter, J. Ufer and B. Wolf, Ger. (East) 94,984 (1973) January 12.
- TE1. "Hydrogen Production Cyclic Process," G. De Beni, (assigned to Europaeische Atomgemeinschaft (EURATOM) Europazentrum Kirchberg), Ger. Offen. 2,005,015 (1970) September 10.
- TE2. "Hydrogen From Mercury and Hydrobromic Acid," G. Schuetz, (assigned to European Atomic Energy Community (EURATOM)), Ger. Offen. 2,258,463 (1973) July 19.
- TF1. "Hydrogen From Iron and Water," K. Friedrich Knoche and J. Schubert, Ger. Offen. 2,155,361 (1973) May 17.
- TG1. "Utilization of the Heat Energy of Nuclear Reactors," D. Souriau, (assigned to Gaz de France), Ger. Offen. 2,221,509 (1972) November 16.
- TG2. "Device and Method For the Use of High-Temperature Heat Energy, in Particular of Nuclear Origin," D. Souriau, (assigned to Gaz de France), U.S. 3,761,352 (1973) September 25.
- TG3. "Hydrogen and Oxygen From Water," S. Stefan, M. D. Donne and G. Schumacher, (assigned to Gesellschaft fuer Kernforschung G.m.b.H.), Ger. Offen. 2,206,283 (1973) August 16.
- TK1. "Energy Transfer in a Nuclear Reactor," (assigned to Kernforschungsanlage Juelich G.m.b.H.), Fr. 1,572,233 (1969) June 27.
- TU1. "Producing polarized Ions Utilizing a Charge-Transfer Collision," W. Haeberli, (assigned to U.S. Atomic Energy Commission), U.S. 3,577,026 (1971) May 4.

SOLAR, WINDPOWER, AND GEOTHERMAL SOURCES

- SK1. "Energy Storage," R. Keraus and G. Schulz, Ger. Offen. 2,201,025 (1973) July 26.
- SO1. "Working Up Natural Waters," (assigned to Osterreichisch Gesellschaft fur Energieforschung m.b.H.), Austrian 176, 204 (1953) September 25.

WASTE MATERIALS

- WC1. "Catalytic Manufacture of Synthesis Gas," R. J. White, (assigned to Chevron Research Co.), Ger. Offen. 2,120,315 (1971) November 18.
- WC2. "Fermentation of Cellulosic Material," L. M. Christensen, (assigned to Commercial Solvents Corp.), Can. 317,238 (1931) November 17.
- WF1. "Processing Household Refuse," F. Fink, Ger. 1,508,003 (1972) September 7.
- WK1. "Preparation and Recovery of Hydrogen," J. E. Zajic and D. A. McGee, (assigned to Kerr-McGee Oil Industries, Inc.), U.S. 3,297,545 (1967) January 10.
- WK2. "Methane or Hydrogen From Sewage," H. J. N. H. Kessener, Ger. 290,126 (1914) February 7.
- WL1. "Fatty Acids; Carbonic Acid; Hydrogen," (assigned to Lefrance Et Cie), Brit. 186,572 (1922) February 2.
- WR1. "Alcohols, Aldehydes, Ketones, Hydrocarbons and Hydrogen From Decomposition of Vegetable Substances," E. L. Rinman, Ger. 557,445 (1929) August 13.
- WS1. "Hydrogen," F. Siegwart, Swiss 180,683 (1936) February 1.
- WT1. "Garbage Disposal With Production of Synthesis or Fuel Gas," C. F. Teichmann and A. Brent, (assigned to Texaco Development Corp.), U.S. 3,671,209 (1972) June 20.

OTHER SOURCES

Hydrides and Boranes

- O1A1. "Borohydrides as Hydrogen Source," (assigned to Accumulatoren-Fabrik A. -G.), Belg. 619,871 (1962) October 31.
- O1B1. "Gas Generator for Reaction of a Liquid Such as Water With a Solid Such as Ca Hydride as for the Production of Gas for Inflating Balloons," C. E. Miller, (assigned to Bendix Aviation, Ltd.), U.S. 2,334,211 (1944) November 16.
- O1D1. "Portable Hydrogen Generator" H. Knorre and K. Stephan, (assigned to Deutsche Gold- und Silber-Scheideanstalt vorm. Roessler), Ger. 1,251,723 (1967) October 12.
- O1D2. "Hydrogen," O. Osborn and R. P. George, (assigned to Dow Chemical Co.), U.S. 2,935,382 (1960) May 3.
- O1D3. " $B_{11}H_{14}$ -Anion Salts," V. D. Aftandilian, (assigned to du Pont de Nemours, E. I., and Co.), U.S. 3,458,531 (1969) July 29.
- O1E1. "Generating Hydrogen From Water and Lithium Hydride," G. Ingram, Jr., N. R. Johns, E. Armstrong and D. C. Wright, (assigned to Eastwood Plastics Ltd.), Brit. 896,038 (1962) May 9.
- O1F1. "Hydrogen-Generating Composition," O. F. Beumel, Jr., (assigned to Foote Mineral Co.), U.S. 3,346,506 (1967) October 10.
- O1H1. "Hydrogen," J. A. Weil, (assigned to Imperial Chemical Industries Ltd.), Brit. 559,162 (1944) February 7.
- O1J1. "High Purity Hydrogen," H. Matsuoka and A. Hasegawa, (assigned to Japan Gasoline Co., Ltd.), Japan. Kokai 73 15,787 (1973) February 28.
- O1M1. "Metal Hydrides," P. P. Alexander, (assigned to Metal Hydrides, Inc.), Brit. 599,972 (1948) March 25.
- O1M2. "Gas Generator," R. H. Hiltz, (assigned to Mine Safety Appliances Co.), Fr. 1,476,239 (1967) April .
- O1M3. "Hydrogen-Generating Composition," L. J. Edwards, (assigned to Mine Safety Appliances Co.), U.S. 3,450,638 (1969) June 17.
- O1M4. "Poly (aminoboranes)", W. E. Zanieski, (assigned to Mine Safety Appliances Co.), U.S. 3,489,528 (1970) January 13.
- O1M5. "Hydrogen-Generating Compositions," R. H. Hiltz, (assigned to Mine Safety Appliances Co.), U.S. 3,666,672 (1972) May 30.

- O1P1. "Hydrogen Source," (assigned to Pertrix-Union Varta G.m.b.H.), Brit. 1,009,694 (1965) November 10.
- O1P2. "Hydrides Useful as Reducing Agents for Organic Compounds," H. A. C. M. Brunning, F. F. Westendorp, J. H. N. Van Vucht and H. Zijlstra, (assigned to Phillips Goeilampenfabrieken), Ger. Offen. 2,003,749 (1970) July 30.
- O1S1. "Hydrogen Generating System," F. H. Bratton and H. I. Reynolds, (assigned to Schjeldahl, G. T., Co.), U.S. 3,419,361 (1968) December 31.
- O1U1. "Hydrogen Generator," L. M. Litz and J. E. Rothfleisch, (assigned to Union Carbide Corp.), Fr. 1,506,781 (1967) December 22.
- O1U2. "Combined Water Removal and Hydrogen Generation System for a Fuel Cell Power Plant," D. P. Bloomfield and W. J. Olsson, (assigned to United Aircraft Corp.), U.S. 3,649,360 (1972) March 14.
- O1U3. "Hydrogen Generator," N. Fatica, (assigned to U. S. Dept. of the Navy), U.S. 3,291,572 (1966) December 18.
- O1U4. "Hydrogen Gas-Generating Compositions," G. L. MacKenzie and P. R. Mosher, (assigned to U.S. Dept. of the Navy), U.S. 3,674,702 (1972) July 4.
- O1U5. "Hydrogen Generating Compositions," W. F. Beckert, O. H. Dengel and R. W. McKain, (assigned to U.S. Dept. of the Navy), U.S. 3,734,863 (1973) May 22.
- O1V1. "Hydrogen Generation by Catalytic Decomposition of Alkali Metal Boranates," M. Jung and H. H. Kroeger, (assigned to Varta A.-G.), Ger. 1,417,753 (1970) May 27.

Caustics and Metals

- O2B1. "Hydrogen," A. P. Belaev and R. M. Golshtein, U.S.S.R. 125,549 (1960) January 15.
- O2B2. "Hydrogen," Ya. S. Pikazin and E. A. Bulashevich, U.S.S.R. 111,165 (1958) June 25.
- O2C1. "Hydrogen," (assigned to Compagnie-Generale D Electro-Chimie De Bozel), Brit. 127,018 (1917) February 28.
- O2E1. "Hydrogen," (assigned to Elektrizitats-A.-G. vorm. Schuckert and Co.), Ger. 528,498 (1931) May 18.
- O2G1. "Hydrogen Generator," G. C. Gill, U.S. 2,721,789 (1955) October 25.

- O2J1. "Hydrogen and Other Gases," G. F. Jaubert, Fr. 698,706 (1929) October 9.
- O2J2. "Hydrogen," G. F. Jaubert, Fr. 42,776 (1933) October 10.
- O2J3. "Hydrogen," G. F. Jaubert, Fr. 759,522 (1934) February 5.
- O2J4. "Hydrogen," G. F. Jaubert, Fr. 43,218 (1934) April 6.
- O2J5. "Hydrogen," G. F. Jaubert, Ger. 620,693 (1935) October 26.
- O2J6. "Production of Hydrogen Under Pressure in Fixed or Portable Apparatus," G. F. Jaubert, Fr. 831,329 (1938) August 30.
- O2J7. "Production of H Under High Pressure," G. F. Jaubert, U.S. 2,332,915 (1944) October 26.
- O2M1. "Apparatus for Producing Hydrogen," P. A. Molchanov, Russ. 26,699 (1931) April 11.
- O2N1. "Hydrogen Production," V. I. Molchanov, (assigned to Novosibirsk Institute of Geology and Geophysics), U.S.S.R. 264,360 (1970) March 3.
- O2O1. "Hydrogen," (assigned to Oxyhydrique Francaise), Brit. 294,150 (1927) July 18.
- O2O2. "Apparatus for Generating Hydrogen by Reaction of a Caustic Alkali Solution on Silicon or Ferro-Silicon," F. E. Lefebvre, (assigned to Oxyhydrique Francaise), U.S. 1,752,187 (1930) March 25.
- O2O3. "Hydrogen," (assigned to Oxyhydrique Francaise), Fr. 751,384 (1934) September 2.
- O2S1. "Apparatus For Producing Hydrogen Under Pressure," (assigned to Societe Loxhydrique Francaise), Ger. 489,932 (1928) July 15.
- O2U1. "Semiportable Installation For Producing Hydrogen by the Reaction of Sodium Hydroxide on Ferrosilicon," (assigned to Union Mobiliere Industrielle), Fr. 1,604,678 (1972) February 11.

Metals

- O3B1. "Improved Hydrogen Production," E. M. D. Smith, W. A. Baker and E. A. G. Liddiard, (assigned to British Non-Ferrous Metals Research Assoc.), British 579,246 (1946) July 29.
- O3B2. "Metal-Water Fueled Reactor For Generating Steam and Hydrogen," A. W. Brooke, Jr. and R. A. Bean, U.S. 3,540,854 (1970) November 17.

- O3C1. "Hydrogen Made From Metals and Water," D. K. Shunway, (assigned to Colgate-Palmolive Co.), U.S. 3,348,919 (1967) October 24.
- O3E1. "Hydrogen From Activated Aluminium and Water," (assigned to L. Elkan Erben, G.m.b.H.), Ger. 294,910 (1916) January 27.
- O3E2. "Hydrogen," (assigned to L. Elkan Erben G.m.b.H.), Ger. 294,910 (1916) October 25.
- O3E3. "Hydrogen," O. Emersleben, Ger. 591,753 (1934) February 2.
- O3E4. "Hydrogen," O. Emersleben, Russ. 44,229 (1935) September 30.
- O3H1. "Hydrogen," S. E. Hybinette and F. C. Cary, U.S. 2,533,937 (1950) December 12.
- O3M1. "Controlled Generation of Hydrogen," H. L. J. Marshall, U.S. 3,252,455 (1966) May 24.
- O3M2. "Hydrogen and Zinc Oxide," R. H. McKee, U.S. 1,355,904 (1921) October 19.
- O3M3. "Pyrophoric and Hydrogen-Producing Compositions," T. Moklowski, Brit. 645,855 (1950) November 8.
- O3P1. "Apparatus for the Decomposition of Water," L. Pome and M. Dumas, Fr. 698,113 (1930) June 27.
- O3P2. "Manufacture of Pure Hydrogen and Regeneration of the By-Products Obtained," R. Puel-Bero, Belg. 400,366 (1934) January 31.
- O3S1. "Pure Hydrogen From Magnesium and Water," M. Suzuki, Ger. Offen. 2,218,470 (1972) October 26.
- O3T1. "Combustible Gas, Potassium and Magnesium Salt From Magnesium Slag," Y. Tanaka, et al. Japan 174,425 (1947) January 20.

Nonmetals

- O4A1. "Phosphoric Acid and Hydrogen From Phosphorus and Water," (assigned to Air Liquide), Brit. 348,629 (1928) November 10.
- O4A2. "Phosphoric Acid," (assigned to Air Liquide), Fr. 679,010 (1928) November 10.
- O4A3. "Sulfur Dioxide and Hydrogen," C. H. MacDowell and H. H. Meyers, (assigned to Armour Fertilizer Works), U.S. 1,693,244 (1929) November 27.
- O4B1. "Phosphoric Acid and Hydrogen," (assigned to Bayerische Stickstoff-Werke A.-G.), Brit. 308,598 (1928) March 24.

- O4B2. "Phosphoric Acid and Hydrogen," (assigned to Bayerische Stickstoffwerke A. -G.), Ger. 544,521 (1928) March 25.
- O4B3. "Phosphates and Hydrogen," N. Caro and A. R. Frank, (assigned to Bayerische Stickstoffwerke A. -G.), Brit. 308,684 (1928) March 26.
- O4B4. "Phosphates and Hydrogen," (assigned to Bayerische Stickstoffwerke A. -G.), Ger. 514,890 (1928) March 27.
- O4B5. "Phosphoric Acid; Hydrogen," (assigned to Bayerische Stickstoffwerke A. -G.), Ger. 514,173 (1929) March 1.
- O4B6. "Phosphorus Pentoxide," (assigned to Bayerische Stickstoffwerke A. -G.), Ger. 506,543 (1929) May 29.
- O4B7. "Phosphoric Acid and Hydrogen," V. N. Ipatev, (assigned to Bayerische Stickstoffwerke A. -G.), U.S. 1,848,295 (1932) March 8.
- O4C1. "Hydrogen," J. C. Clancy, Can. 215,384 (1922) January 24.
- O4C2. "Hydrogen," J. C. Clancy, U.S. 1,526,529 (1925) February 17.
- O4D1. "Phosphoric Acid and Hydrogen," M. Larsson, (assigned to du Pont Ammonia Corp.), U.S. 1,756,429 (1930) April 29.
- O4F1. "Phosphoric Acid; Hydrogen," I. G. Farbenind, Ger. 478,018 (1925) December 4.
- O4F2. "Phosphoric Acid and Hydrogen," G. Wietzel, F. Hauback and R. Huttner, (assigned to I. G. Farbenind), Ger. 480,961 (1925) December 4.
- O4F3. "Phosphoric Acid; Hydrogen," I.G. Farbenind, Ger. 485,068 (1928) August 16.
- O4F4. "Hydrogen and Phosphoric Acid," I.G. Farbenind, Brit. 324,122 (1928) October 20.
- O4F5. "Phosphoric Acid and Hydrogen," I.G. Farbenind, Brit. 325,533 (1928) November 16.
- O4F6. "Phosphoric Acid and Hydrogen," I.G. Farbenind, Brit. 328,711 (1929) February 15.
- O4F7. "Phosphoric Acid - Hydrogen," I.G. Farbenind, Ger. 504,343 (1929) May 14.
- O4F8. "Phosphoric Acid and Hydrogen," I.G. Farbenind, Fr. 675,986 (1929) May 31.
- O4F9. "Hydrogen and Oxyacids of Phosphorus," I.G. Farbenind, Brit. 337,109 (1929) August 24.

- O4F10. "Phosphoric Acid and Hydrogen," A. Mittasch and G. Wietzel, (assigned to I.G. Farbenind A. -G.), U.S. 1,732,373 (1930) October 22.
- O4F11. "Phosphoric Acid-Hydrogen," G. Pauckner and R. Huettner, (assigned to I.G. Farbenind A. -G.), U.S. 1,815,581 (1931) July 21.
- O4F12. "Acids of Phosphorus and Hydrogen by Reaction of Steam and Phosphorus," W. Wild and G. Wietzel, (assigned to I.G. Farbenind A. -G.), U.S. 1,823,923 (1932) September 22.
- O4F13. "Phosphoric Acid and Hydrogen From Phosphorus and Water," G. Wietzel and G. Pauckner, (assigned to I.G. Farbenind A. -G.), U.S. 1,916,594 (1933) July 4.
- O4G1. "Method For Hydrogen Generation From White Phosphorus," R. E. Kegan, (assigned to General Electric Co.), U.S. 3,369,868 (1968) February 20.
- O4H1. "Hydrogen; Nitrogen; Sulfur Dioxide; Fertilizers; Cellulose Pulp; Tanning Agents," C. Harnist, Brit. 194,289 (1923) February 27.
- O4I1. "Preparing Phosphoric Acid and Hydrogen," V. N. Ipatov, Russ. 44,431 (1929) April 6.
- O4I2. "Phosphoric Acid and Hydrogen," V. Ipatov and C. Freitag, U.S. 1,895,329 (1933) January 24.
- O4L1. "Hydrogen," F. G. Liljenroth and M. Larsson, Can. 246,431 (1925) January 27.
- O4L2. "Production of Hydrogen and Phosphoric Acid," F. G. Liljenroth, Can. 247,164 (1925) February 24.
- O4L3. "Hydrogen," F. G. Liljenroth and M. Larsson, U.S. 1,605,960 (1927) November 9.
- O4N1. "Hydrogen," (assigned to Nitrogen Corporation), Brit. 163,323 (1921) May 17.
- O4N2. "Hydrogen and Carbon Monoxide," (assigned to Norsk Hydro-Elektrisk Kvaelstofaktieselskab), Norw. 37,593 (1923) August 6.
- O4N3. "Production of Hydrogen and Phosphoric Acid," (assigned to Norsk Hydro-Elektrisk Kvaelstofaktieselskab), Norw. 45,018 (1928) April 2.
- O4S1. "Phosphoric Acid and Hydrogen," (assigned to Soc. D Etudes Pour la Fabrication Et L Emplot des Engrais Chim), Fr. 682,516 (1929) January 19.

- O4S2. "Ammonium Phosphate and Hydrogen," E. Voituron, (assigned to Soc. D Etudes Scientifiques Et D Entreprises Industrielles), Brit. 352,424 (1929) January 22.
- O4S3. "Ammonium Phosphate," (assigned to Soc. D Etudes Scientifiques Et D Entreprises Industrielles), Fr. 685,060 (1929) November 16.
- O4U1. "Phosphoric Acid and Hydrogen From Phosphorus and Steam," E. Urbain, Brit. 278,578 (1926) December 7.
- O4U2. "Hydrogen and Phosphoric Acid," E. Urbain, Fr. 638,528 (1926) December 7.

Ammonia

- O5A1. "New Method For Hydrogen Production," S. A. Gregory, (assigned to Aei-Birlec Ltd.), Brit. 977,380 (1964) December 9.
- O5B1. "Dissociation of Ammonia," E. F. Rosenblatt and J. G. Cohn, (assigned to Baker and Co., Inc.), U.S. 2,601,221 (1952) June 17.
- O5D1. "Separation of Gases of Dissociated Ammonia," J. T. Kummer, (assigned to Dow Chemical Co.), U.S. 3,102,003 (1963) August 27.
- O5D2. "Mixtures of Hydrogen and Nitrogen," (assigned to Du Pont Ammonia Corp.), Fr. 720,936 (1931) July 31.
- O5D3. "Nitrogen and Hydrogen From Ammonia," R. L. Dodge, (assigned to E. I. du Pont de Nemours and Co.), U.S. 1,845,784 (1932) February 16.
- O5D4. "Mixture of Nitrogen and Hydrogen Formed by Cracking Ammonia," G. W. Burke, (assigned to E. I. du Pont de Nemours and Co.), U.S. 1,988,781 (1935) January 22.
- O5E1. "Hydrogen Generating System," W. C. Pfefferle, (assigned to Engelhard Industries, Inc.), U.S. 3,198,604 (1965) August 3.
- O5F1. "Mixture of Hydrogen and Nitrogen," L. Andrusson, (assigned to I. G. Farbenind. A.-G.), Ger. 641,596 (1937) February 6.
- O5G1. "Nitrogen; Hydrogen," I. Jenkins and S. V. Williams, (assigned to General Electric Co., Ltd.), Brit. 453,307 (1936) September 9.
- O5G2. "Ammonia-Dissociating Apparatus," C. H. Terpenning, Jr., (assigned to General Electric Co.), U.S. 3,025,145 (1962) March 13.
- O5I1. "Apparatus for Decomposing Ammonia," (assigned to Imperial Chemical Industries, Ltd.), Ger. 660,640 (1938) May 30.
- O5I2. "Apparatus for Decomposition of Ammonia Into its Elements," E. H. Salisbury, (assigned to Imperial Chemical Industries Ltd.), U.S. 2,013,809 (1935) September 10.

- O5I3. "Nitrogen and Hydrogen by Decomposition of Ammonia," C. S. Hall, (assigned to Imperial Chemical Industries Ltd.), U.S. 2, 013, 652 (1935) September 10.
- O5I4. "Nitrogen and Nitrogen-Hydrogen Mixtures," J. L. Pearson, (assigned to Imperial Chemical Industries, Ltd.), Brit. 473, 696 (1937) October 18.
- O5I5. "Apparatus for the Thermal Decomposition of Ammonia to Produce Hydrogen and Nitrogen," J. L. Pearson, (assigned to Imperial Chemical Industries Ltd.), U.S. 2, 161, 746 (1939) June 6.
- O5I6. "Apparatus for Decomposition of Ammonia," (assigned to Imperial Chemical Industries of Australia and New Zealand), Australian 101, 464 (1937) July 8.
- O5J1. "Decomposition of Ammonia by a Two-Stage Process," T. Yamamoto, S. Yamanouchi, M. Kuraishi and M. Kishimoto, (assigned to Japan Gas-Chemical Co., Inc.), Japan. 71 34, 487 (1971) October 9.
- O5L1. "Hydrogen From Ammonia for the Hydrogenation of Fats," C. M. Leon, Span. 239, 730 (1958) January 30.
- O5M1. "Preparation of Pure Hydrogen," W. Goehring, (assigned to J. F. Mahler Apparate- und Ofenbau K.-G.), Ger. 1, 238, 884 (1967) April 20.
- O5M2. "Ultrapure Hydrogen From Ammonia," (assigned to Milton Roy Co.), Brit. 1, 022, 521 (1966) March 16.
- O5O1. "Hydrogen Generator," F. Lalanne, (assigned to Office National Industriel de Lazote), Fr. 1, 469, 045 (1967) February 10.
- O5P1. "Hydrogen," F. H. Pauling, Ger. 649, 544 (1937) August 26.
- O5S1. "Hydrogen by the Decomposition of Ammonia," A. Normand, (assigned to Societe Chimique de la Grande Paroisse, Azote et Produits Chimiques), Fr. 1, 564, 814 (1969) April 25.
- O5S2. "Hydrogen Production," A. Normand, (assigned to Societe Chimique de la Grande Paroisse, Azote et Produits Chimiques), Fr. Addn. 95, 172 (1970) July 31.
- O5S3. "Apparatus for Thermal Decomposition of Liquid Ammonia to a Mixture of Hydrogen and Nitrogen," M. Soldan, J. Hromada, C. Barcal and B. Schiller, Czech. 110, 191 (1964) March 15.
- O5S4. "Hydrogen-Nitrogen Mixture by Thermal Decomposition of Ammonia," W. A. Backlund, (assigned to Stockholms Superfosfat Fabriks A/B), Swed. 157, 917 (1957) February 26.

- O5U1. "Hydrogen Generation for Fuel Cells," K. V. Kordesch, (assigned to Union Carbide Corp.), Brit. 1,146,900 (1969) March 26.
- O5V1. "Ammonia Vaporizer and Dissociator," P. O. Becker and H. M. Robey, (assigned to Varian Associates), U.S. 3,379,507 (1968) April 23.

Inorganic Compounds

- O6D1. "Amorphous Carbon and Hydrogen," J. V. G. Van Den Driessche, U.S. 1,887,792 (1933) November 15.
- O6D2. "Hydrogen and Phosphoric Acid," F. G. Liljenroth, (assigned to Du Pont Ammonia Corp.), U.S. 1,807,790 (1931) June 2.
- O6N1. "Hydrogen; Carbon Monoxide," (assigned to Norsk Hydro-Elektrisk Kvaelstofaktieselskab), Brit. 181,326 (1922) March 8.
- O6S1. "Phosphorus, Phosphoric Acid," E. Voituron, (assigned to Soc. d Etudes Scientifiques et de Entreprises Industrielles), Brit. 346,038 (1929) January 9.
- O6S2. "Mixture of Hydrogen and Carbon Monoxide," S. A. Holding, (assigned to Soc. Internationale des Carburants "Brevetes Consalvo"), Belg. 426,221 (1938) March 31.
- O6S3. "Phosphorus and Gases for Synthetic Raw Material," T. Fujimura, (assigned to Sumitomo Chemical Industries Co.), Japan 3663 (1953) August 3.

Miscellaneous

- O7A1. "Separation of Hydrogen From Gaseous Mixtures Containing Hydrogen," R. J. Wingrove, (assigned to Associated Electrical Industries Ltd.), Brit. 972,093 (1964)
- O7B1. "Hydrogen; Sodium Sulfate; Gas-Purifying Materials," P. Becquevort and C. Deguide, Brit. 107,807 (1916) July 11.
- O7C1. "Apparatus for Producing Hydrogen by Action of An Electric Arc on Steam," H. D. Carter, U.S. 2,045,832 (1936) June 30.
- O7D1. "Phosphoric Acid and Hydrogen," M. Larsson, (assigned to DuPont Ammonia Corp.), U.S. 1,797,726 (1931) March 24.
- O7F1. "Alkali Phosphate and Hydrogen," R. Huttner, (assigned to I. G. Farbenind. A.-G.), Ger. 532,860 (1929) September 11.
- O7F2. "Apparatus for Effecting Gas Reactions by Means of Electric Discharges," (assigned to I.G. Farbenind. A.-G.), Brit. 354,735 (1930) February 5.

- O7F3. "Alkali Metal Hydroxides; Hydrogen," (assigned to I. G. Farbenind. A.-G.), Brit. 415,466 (1934) August 27.
- O7H1. "Manufacture of Hydrogen, Carbon Monoxide or Mixtures of These Gases," A. Foss, B. F. Halvorsen and N. Stephansen, Can. 229,570 (1923) March 13.
- O7J1. "Chlorobenzene and Hydrogen," W. Jeunehomme, Belg. 398,222 (1933) September 30.
- O7K1. "Chemical Decomposition of Water for Producing Gases for Generating Power by Recombination," T. D. Kelly, Brit. 319,604 (1928) June 23.
- O7M1. "Ammonia-Soda Process," A. Mentzel, Ger. 558,750 (1930) August 27.
- O7M2. "Metaphosphoric Acid and Hydrogen," C. G. Miner, U.S. 1,837,230 (1932) December 22.
- O7M3. "Decomposition of Water," Y. Morishima, Fr. 694,346 (1930) April 23.
- O7N1. "Synthetic Ammonia, Hydrogen and Sodium Bicarbonate," A. Nagelvoort, U.S. reissue 15,314 (1922) March 21.
- O7N2. "Hydrogen and Carbon Disulfide," I. G. Nixon, Brit. 1,126,465 (1968) September 5.
- O7N3. "Carbon Monoxide and Hydrogen From Carbon Dioxide and Hydrogen Sulfide," A. Nomata, Japan 176,281 (1948) May 21.
- O7N4. "Hydrogen; Carbon Monoxide; Sulfur Compounds," (assigned to Norsk Hydro-Elektrisk Kvaestofaktieselskab), Brit. 176,779 (1922) March 3.
- O7R1. "Hydrogen and Sulfur," J. G. Weiner and C. W. Leggett, (assigned to Ralph M. Parsons Co.), U.S. 2,979,384 (1961) April 11.
- O7S1. "Aluminum," J. Yurimoto and H. Ryu, (assigned to Sumitomo Chemical Co., Ltd.), Japan 14,005 (1963) August 3.
- O7S2. "Aluminum," J. Yurimoto and H. Ryu, (assigned to Sumitomo Chemical Co., Ltd.), Japan 15,445 (1963) August 21.
- O7T1. "Fumaric Acid and Urea From Lignified Cellulose," A. M. Thomsen, U.S. 3,030,276 (1962) April 17.
- O7T2. "Turbulent Flow Flame Synthesis of Hydrogen Cyanide," S. Fujise, N. Nagai, M. Mitsunaga and T. Kobayakawa, (assigned to Toyo Koatsu Industries, Inc.), U.S. 3,063,803 (1962) November 13.

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