

133-156
8 1/2 158
1
THE

Mining & Petroleum Standard

AND

432
310

AMERICAN GAS-LIGHT JOURNAL

DEVOTED TO

GAS, MINING, PETROLEUM, WATER SUPPLY,
AND SCIENTIFIC SUBJECTS GENERALLY.

VOLUME VII.

FROM JULY 1, 1865, TO JUNE 30, 1866

EDITORS:

JAMES W. BRY

M. P. CALLENT

NEW YORK

OFFICE, No. 22 PINE STREET, OPPOS.

INDEX.

PETROLEUM.

Formation of Coal from Petroleum. 1
 California Petroleum Interest. 1
 Progress of the Petroleum Interest. 1
 Oil in California. 8
 Petroleum Review. 8, 24, 40, 56, 72, 88, 98, 117, 133, 149, 165
 Petroleum: What It Is, How Reduced. 17
 The Oil Share Crisis. 17
 Idle and Abandoned Wells on Oil Creek to be Sealed. 17
 Oil in California. 17
 Oil in Colorado. 23
 Different Kinds of California Oil. 24
 Geography and Geology of Petroleum. 25
 Oil-bearing Rocks of Ohio. 49
 Petroleum in Canada. 68
 Oil Interests in Canada. 68
 Where Oil Wells Will Not Be Found. 68
 Estimated Product of the Pennsylvania Oil Region. 68
 New Theory about Petroleum. 68
 Canadian Petroleum. 71
 Petroleum in Cuba. 75
 Oil Regions of West Virginia. 79
 Oil in Delaware. 79
 Theories of Petroleum. 79
 Nantucket on the Wagon. 79
 Oil in New South Wales. 79
 The Future of Petroleum. 93
 Novel Kerosene Oil Lamp. 93
 Oil Companies in Ohio. 97
 Petroleum as a Fuel. 111, 127, 159
 Action of Petroleum on the Human System. 113
 Another Theory about Petroleum. 114
 Hydrocarbon Oil for Generating Steam. 114
 Petroleum in Canada. 114
 Profit of Petroleum. 130
 Petroleum in Galicia. 143
 Is there Coal Oil in Missouri. 174
 The Exports of Petroleum. 174
 Petroleum Exported from the U. S. 174
 Petroleum in Alabama. 174
 Ohio Mutual Petroleum Co. 181
 Petroleum as a Steam Fuel. 190
 Kentucky Oil Wells. 193
 Duration of the American Petroleum Wells. 207
 Petroleum. 208
 The Railroad Rivalries for the Oil Trade. 208
 The Phenomena of the Oil Wells on Oil Creek. 208
 Petroleum as a Fuel for Steamships. 243
 The Troubles of Shippers of Oil from the Wells. 243
 Oil Products of Tarr Farm, Oil Creek. 243
 Petroleum Market. 259
 Petroleum Export Trade. 249
 The Canada Oil Region. 267
 The Great Burning Well. 267
 The Oil Product for 1845. 237
 The Development of Petroleum as a Science. 278, 286, 321
 Features in Good Rock the Reservoirs of Petroleum. 278
 Cure for Eburnation. 280
 Great Strike on Beanehoff. 280
 How Petroleum is formed. 289

Improvements in treating Hydrocarbon Oils and in vessels for containing them. 289
 Will the supply of Oil Continue. 305
 Oil Well Machinery. 305
 California Petroleum Matters. 305
 Geological Features of the American Plateau. 321
 Formation of Coal from Petroleum. 327
 Oil Summary. 327
 Petroleum Wells of Cuba. 344
 Oil Indications at Lake Superior. 321
 Utah Coal Oil. 321
 Oil in Notawaga. 321
 Late Oil Strikes. 344
 Petroleum in Europe. 344
 Oil Wells of Burma. 353
 The Oil Rock of Ohio. 353
 Core Test for Kerosene Oil. 353
 New System of Drilling Oil—Asbestos and Cannelite. 359
 Petroleum Improving. 370
 Oil Excitement in Ohio. 370
 Struck Oil. 370
 Boring for Oil in Sullivan County. 370

MINING.

Mining Prospect in Hamblett, Nev. 3
 The Present Consolidated Mining Co. of Arizona. 2
 Dr. J. C. Ayer's Reduction process for Precious Metals. 2
 Testimony of an Expert. 3
 Gold in New Zealand. 6
 The Nation's Wealth in Gold and Silver. 18
 How the Mexican Territory is Divided. 35
 Mining in Serbia. 35
 Quicksilver at Mount Diablo. 35
 The Riches of Montana. 50
 Silver Mines of Nevada. 51
 Gold Production from 1880 to 1885. 55
 Quartz Operator's Hand Book. 55
 School of Mines—Columbia College. 66
 Gold Mines in Iberia. 67
 Drawing Coals—An Improved Plan. 68
 Copper in Nevada. 68
 A Mountain of Silver. 68
 The Precious Metals. 69
 Mineral Wealth of Bolivia. 69
 Mineral Resources of this Continent Re-estimated. 84
 Michigan Iron District. 97
 Michigan Mining Companies. 98
 New Mineral. 114
 Coal Mines of the World. 114
 Australian process of Smelting and Assaying Gold. 128
 Gun Cotton in American Mines. 129
 Silver—whence and how obtained. 143
 On the Tubing of Shafts. 159
 Mining in Mexico. 160
 Copper Mines in New South Wales. 160
 Coal Digging Machine. 160
 Desulphurizing Ores. 161
 Gold-saving Machinery in Colorado. 162
 Detection of Fire Damp. 163
 New School of Mining and Petroleum Geology. 165
 Mining in Algeria. 165

End of the Mariposa Estate. 175
 Mineral Products of Belgium. 175
 Improved Blasting Powder. 175
 Iron in Spain. 175
 Enamelled Amalgamating Pans. 175
 The Mineral Products of Greece. 191
 After the War the Mines. 191
 Gold in Pennsylvania. 197
 Mining Interests in Ohio. 204
 Copper Companies in California. 209
 Mines in Colorado. 209
 Different Improved Processes for Working Gold Ores. 223
 The Amalgamating Company. 229
 Annual Report of the Gould & Curry Company. 244
 Canadian Miners' Association. 245
 A Flourishing Mine. 245
 Profits of German Mines. 245
 New York Mining Exchange. 249
 Colorado Coal and Silver. 253
 Copper Mine in Vermont. 253
 New Crushing Machinery in the Lake Superior Copper Region. 253
 A Rich Assay. 259
 Advantages of a Knowledge of Mineralogy. 274
 Silver Urea Decrease in Value According to Depth. 275
 Plumbago. 275
 Ancient Mining. 275
 Milling in Nevada. 290
 Patern's Process of Silver Extraction. 306
 Important Discovery at the New Almaden Mine. 306
 Mining Reports from Nevada. 313
 Gold Mines in New England. 322
 Transmutation of Metals. 333
 Mining in Montana. 333
 Gold Mining in Nevada. 354
 A Rare Mineral. 354
 An Extraordinary Copper Mine. 354
 Discoveries of New Gold and Silver Mines. 354
 Discoveries of Copper in Nevada. 354
 Coal Supply in England. 354
 Coal in Russia. 354
 Great Discovery in Buckingham. 355
 Lake Superior Copper. 355
 New Gold Diggings. 356
 Mineral Property of Virginia—Its Condition and Prospects. 370
 Lead as an Amalgamator. 370
 Sutro's Great Tunnel. 371
 Old Mines Re-discovered. 371

GAS.

Hydrocarbon Gas. 3
 Gas Light Companies of the United States. 4, 53
 Gas Works. 24
 Clay and Iron Retorts. 40
 Gas in Madrid. 40
 Gas in London. 40
 New Light. 53
 Consumption of Gas in England. 71
 Heating by Gas. 84
 Oxygen as a Means of Economizing the Consumption of Coal Gas. 84
 Lenoir Gas Engine. 84

Inspectors of Gas Works. 85
 Commercial Analysis of Coal. 93
 Leakage of Gases. 95
 Safety Lamps. 95
 New German Gas Apparatus. 111
 Asbestos. 128
 Lighting of Shanghai. 128
 Lighting of St. Petersburg. 128
 Leakage of Gas. 128
 Gas Coal. 133
 The Manufacture of Coke from Small Black. 144
 Desulphurizing Coal and Coke. 144
 Means of Increasing Illumination. 160
 Gas Explosion in England. 160
 New Method of Gas Manufacture. 181
 Gas Sold by the Belgium Gas Co. 181
 The Gas Explosion at Nine Kims. 193
 Modification of the Lenoir Engine. 193
 Robbing Gas and Water Joint. 197
 Origin of Clay Retorts. 207
 Death from Gas Poisoning. 209
 Meter Rent. 219
 The Manhattan Gas Co. and Lighting the City Lamps. 247
 Wood Gas. 247
 Gas Companies and Gas Consumers. 248
 Utilizing Waste Gas from Blast Furnaces to Commercial Account. 259
 Gas Explosion. 259
 Gas Purification. 259
 Different Processes of Generating Gas. 264
 Gas Heating and Cooking Apparatus. 264
 Coal Gas Superseded. 275, 281
 Report New City Gas Co. Montreal. 281
 Dimensions of Service Pipe. 280, 295
 Gas Inspection. 290, 295
 Foreign Gas Summary. 306
 New Metropolitan Gas Bill. 307
 Unreasonable Prejudices Against Gas Companies. 323
 Atmospheric Gas. 329
 Gas at Moscow. 329
 Philadelphia Gas Works. 329
 Petroleum Gas vs. Coal Gas. 344, 355
 Gas Works Burned. 344
 La Porte Gas Works. 344
 Gas from Peat. 344
 Serious Explosion of Gas. 355
 Foreign Gas Summary. 355
 Gas Light Companies and the Board of Health. 360
 Lav. Gas Tips. 360
 Introduction and Progress of Gas into Society. 371
 Commercial Value of Oxygen. 371
 Gas from Wood. 376

WATER.

Papers on Hydraulic Engineering. 6
 Water in New York. 40
 Sewerage in Paris. 59
 Wells in Algiers. 70
 Water for Rome. 70
 Short of Water. 71
 Superiority of American Water Works. 96
 Restoration of the Marican Aqueduct. 98
 New Water Engine. 114

Great Aqueduct in France 148
Water Supply of Paris 146
Water and Noxious Vapors 149
Water for Paris 159
The Cholera and Water 161
The Use of Water as Fuel 176
Subterranean Stream under the E. Penn.
R. R. Workshops 176
Seeping through Water 208
Novel Hydraulic Machine 207
New Water Meter 207
Non-compressibility of Water 207
The Artesian Wells of Chicago 212
Paris Water Supply 223
Filtering Water 222
Brooklyn Water Supply 229
Bursting of a Water Main in Liverpool
236
Liverpool Water Supply 256

MISCELLANEOUS.

An Ammonia Engine 2
Compressing Air and Gas 3
Shovel and Boat Laces Dangerous to
the Working Classes 7
Life 7
Pocket Handkerchief Art 8
Gold 8
The Atlantic Cable 19
The Selenometer 19
A New Oil Seed 22
Important Invention 22
New Mode of Telegraphing 22
A New Kind of Fuel 22
California Gold Trade 22
Nitric Acid 22
A New Mucilage 22
The Male and Female Voice 22
Coal Tar Colors 22
Formation of Coal 22
What is Sterling Money 22
Fish as Food 22
Telegraph Instruments 22
Detroit Convention 24
A Tower of Skulls 26
The Atlantic Cable 26
Idea for Hunters 40
Charges of the Atlantic Telegraph 40
Novel Explosion 40
Accident to the Cable, Extraordinary
Character of, 53
Submarine Cables 52
Man Engines 52
Consumption of Fuel in France 59
Mouse Power 59
Safe Gunpowder 59
Ink 59
Vegetable origin of Diamonds 59
Aerial Navigation at last 70
Respiratory Apparatus 70
Aquatic Umbrella 70

Iron Fuel 70
Cheapering of Food 70
Discovery of Crucible Clay 70
Silks to be More Coarse 71
Patent or Imitation Stones 71
Carious Smell 71
New Fire Annihilator 71
"Sovilla" to Reynolds 71
History of Coke 71
How to get to Idaho 71
Cameron Coal Company 72
Uniting the Atlantic with the Pacific 72
Glycerine 72
New and Wonderful Discovery 72
The Founder and the Defender 72
Artificial Oil of Almonds 72
Remarkable Tree 72
Simple, Safe and Easy Mode of Prepar-
ing Oxygen 80
Sea Soundings 81
Salt of the Dead Sea 81
Traction of Horses at various rates of
travel 81
Casting Iron Tubes 81
Colossus of Rhodes 81
Power of the Magnet 81
Preservation of Ships' Bottoms 85
Atmospheric Pressure as a Source of Me-
chanical Power 85
Lace Made by Caterpillars 85
Important discovery 85
Prof. Torrey's Summer Vacation 85
Gale's Glass Protected Gunpowder 96
Baptism by Electricity 96
Electrical Science 97
Origin of Stockings 97
Magnesium in the Ocean 97
Interesting Experiments 97
Precise period when Romæa Religned 97
The Stones of the Temple 98
New Fire Annihilator 98
How to get to Idaho 98
Production of Steel by Means of Gases
98
Iron Men and Warehouses 112
New Atlantic Telegraph 112
Curious Calculation 112
Glass Turning 112
Manufacture of Magnesium 112
Arsenic 112
Ingenious Invention 114
Economic Magnesium Light 114
Combustible Mud 114
Shingle and Heading Machine 117
Am. Institute Fair 101, 117, 122
Self-acting Apparatus for the Lighting
of Buoys 117
Scares of the Deep 129
New and Harmless Remedy 129
Big Trees 129
Gunpowder and Electricity 130
Luminous Hats 130
Great Natural Curiosity 145

A Conglomerate Snake 145
Horse Feeding One Another 145
New Railway Axle Box 145
Pharaoh's Carpenters 145
Another New Gunpowder 145
Subsidence of the Earth's Crust 146
About Hair 146
Hot Air Engines 146
Molten Power 146
New Patent Iron Doors 149
Steel and Cast Iron 149
Preventing Oxidation of Iron and Steel
160
Scientific Mission to Greece 160
Nitro-Glycerine 161
Deceptive Game 161
A Feat in Boiler Making 161
How Red Hair for Ladies is Obtained in
Paris 161
Spots on the Sun 162
Cab Fare Indicator 165
Loam Bridge 165
Exports from the U. S. 174
A New Disc Machine 175
Piston Packing 175
Fitch Lake of Trinidad 176
An Oasis in Nevada 176
Immense Casting at Ft. Pitt Works 176
How a Successful Copper Co. Pays 176
Copper and Oil Shares at Auction 176
Mahogany Rail Sleepers 176
Lead Works in America 176
Utilising Blast Furnace Gases 177
A New Kind of Galvanic Battery 177
Obtaining Motive Power 177
Cutting Metal 181
N. Y. Mercantile Journal 181
Varnish for Metals 181
Coal, its Use and Abuse 192
The Copper Snake Question 192
New Silver Salt 192
The Great Pyramid 192
A Ship of the Second Century 197
Properties of Greases, &c. 197
Ships built of Magnesium 198
Geological Researches 207
The Tin Trade 207
Ventilation 208
A Toad Undressing 208
Lead Poisoning 208
Communication between Passengers and
Railway Guards 209
Delaware 10 Daily Use 209
Nitro Glycerine 209
Platinum Micros 209
New Gunpowder 212
Coal and Oil 212
Affection of a Dog for a Cat 212
Clark's Damp 212
Coal as a Source of Heat and Light 225
Tin Stone 245
Iron Box 245
Ruby and Sapphire 245

Thin-heat Iron 247
New Use for Magnesium 248
Wonderful Developments at Pittsboro
City, Penn. 257
Atmospheric Pressure in regard to Altitude
258
How Shall the Bed be Placed 261
An Instrument for Detecting Fire Damp
in Mines 261
A Vessel propelled by Electricity 261
Galactopyne 261
Light as a Source of Motive 261
A Race of Dwarfs 261
Gold Yield of Oregon 275
Treatment and uses of Peat and Peaty
Material 276, 291, 297, 372
Peat as Fuel 290
Curiosities of the Oil Region 289
Lighting the Streets of Brooklyn 290
New Fire Alarm 281
Sculptor Wall in Indiana 290
Composition of Atmospheric Air 291
Solubility of the Gases 291
Valuable Invention 295
Desulphurising Coal 297
Extracting silver from Lead 298
A Word to the Wise 312
News from the Pacific 312
The Candle Flak 312
New Artificial Lights 312
The Supply of India and Bromine 322
Manufacturers of Peat Fuel 324
Nitro Glycerine 325
A Match Factory 328
Manufacture of Magnesium 328
A New Material for Sculptors 329
Exhaustion of English Coal Fields 329
Experiments with Nitro-Glycerine 340
Our Iron and Steel Resources 344
Brevities 340
Lighting the Streets of Brooklyn 344
Coal in Oregon 344
Cholera Preventive 344
Fatal Accidents 346
Early Days of Magnesium 356
Electricity Applied to Sounding 356
Formation of New Hydrocarbons 359
A Curious Fact 356
Nitro Glycerine Transportation 360
Coal Fields of the West 360
The Far West 360
Public Works at Omaha 360
French Prize for Electric Light 360
Successful Trial of a Submarine Nov-
elty 371
The Cities of Oildom 371
Close of the Volume 376
Discovery of Rock Salt near New Or-
leans 376
Peat 376
An Immense Structure upon Sixteen
Hundred Scaws 376
Assay Offices 376

MINING & PETROLEUM STANDARD

AND

American Gas-Light Journal.

Publishing Office, Tribune Buildings, No. 1 Spruce street, corner of Nassau.

VOL. VII—No. 25—Whole No. 133.

NEW YORK, MONDAY, JULY 3, 1865.

\$3 PER ANNUM—IN ADVANCE.

PETROLEUM.

FORMATION OF COAL FROM PETROLEUM.

One of the more generally accepted theories respecting the formation of petroleum supposes that substance to be a product of the destructive distillation of coal by means of the earth's internal heat. There is being discussed just now, however, a theory which is the exact converse of this—a theory according to which, instead of petroleum being formed from coal, coal was formed from petroleum. It is well known that "all organic substances which are not themselves volatile, such as wood, flesh, and other vegetable and animal matters, yield, when subjected to the influence of heat below dull redness, tarry oils, having in all cases the general character of petroleum, and differing only according to the specific differences in the materials from which they may have been obtained," and the new hypothesis supposes that the materials from which our coal beds were formed were converted in the first instance into such "tarry oils," and that these oils, under the long continued action of heat, gradually lost nearly all their oxygen and the chief part of their hydrogen, the residuum gradually becoming solid. The advocates of this theory point in support of it to the phenomena presented by the celebrated "Pitch Lake" of Trinidad. This lake covers an area of ninety-nine square miles, and is of very great depth. The bitumen is solid and cold near the shores of the lake, and gradually increases in temperature and softness toward the center, where it is boiling. The ascent to the lake from the sea, a distance of three-quarters of a mile is covered with a hardened pitch, on which trees and vegetables flourish, and about Point la Braye the masses of pitch look like black rocks among the foliage." Mr. G. P. Wall describes the lake as yielding three kinds of asphaltum: 1. Asphaltum glance, which is hard and brittle, of an intensely black, brilliant luster, and conchoidal fracture. 2. Ordinary asphaltum, of a brownish-black color, containing 20 to 25 per cent. of earthy admixture and a considerable proportion of water, and possessing the property of plasticity, which it gradually loses on long exposure to the sun and atmosphere. 3. Asphaltum oil, occurring associated and diluted with water, but appearing, when concentrated, as a dense black fluid with a powerful bituminous odor. If collected in an open vessel, the more volatile part of this oil evaporates after a few months, leaving a solid black substance, of similar appearance and analogous properties to asphaltum glance." It is alleged that the theory of coal having been condensed from a liquid, in the same way as this "asphaltum glance," accounts better than any other for its purity, seeing that "all impure or foreign substances which did not decompose would most likely be of greater specific gravity than oil, and consequently sink to the bottom." The high state of preservation in which plants frequently occur in our coal-beds, and the fact of trees being found erect in them, are easily accounted for upon this theory. Trees grow on the hardened pitch of the Trinidad lake, within a short distance of other pitch in a state of ebullition, and trees can readily conceive of the hardened pitch, in any similar case, being fastened by the eruption of the boiling pitch, and of the trees lying on it being thus fossilized, or of the lake over-

flowing its banks and so submerging adjacent vegetation. The new theory also furnished a simple explanation of the "exceeding thinness of many coal-seams, which thin out into mere strata over extensive areas of solid rock," and might well be due to an oily liquid having overflowed the rock when it was at the surface, and having then, in process of time, in part evaporated and in part solidified. The shape and dimensions of many other coal-seams are equally consistent with the idea of the strata in question being the solid residuum of what once were lakes of oil—and indeed the great majority of all known coal-formations are basin-shaped, "with long and sloping sides dipping down to a common and profound center," a fact which certainly tells with great force in favor of the new hypothesis. On the whole it must be admitted that the theory that the first step in the formation of coal was the production of "tarry oil," by the destructive distillation, at a comparatively low heat, of vegetable and perhaps animal matter, and that coal consist of the less volatile portions of these oils, solidified and hardened by heat and pressure, is not without plausibility—at least in respect of certain kinds and formations of coal. There are some coal-beds which present phenomena which could scarcely, so far as we can at present see, be accounted for on this theory; but further researches will doubtless throw additional light on the whole matter—and it is not necessary that we should suppose that all the coal that exists was formed precisely in the same way.—*Mechanics' Magazine.*

CALIFORNIA PETROLEUM INTEREST.

We understand that oil has been discovered on Hell's ranch, about fifteen miles below Holmwood Bay, where oil had previously been discovered on Purissima creek.

The new steamer "Del Norte," which started on her first trip up the coast on Wednesday, took up, to Humboldt Bay, machinery for boring for oil on the ground recently purchased for the purpose by Levi Parsons and other prominent capitalists of this city. Operations on Mattole creek will be commenced as soon as the machinery can be placed on the ground.

The North Fork Oil Company is the title of a new organization which filed its papers of incorporation on Monday. The object of the company is to conduct the business of boring for oil in the Mattole mining district, Humboldt county, California. Their capital stock is \$500,000, which is divided into 5,000 shares of \$100 each. Their business will be managed by a Board of three Trustees, which, for the first three months, will consist of Thomas G. Richards, B. Reinhardt and Joshua Lyon.

The Wilmington (Los Angeles) Journal of April 23d, says that the Los Angeles Petroleum Oil Company commented to drill by steam on the Saturday previous, and on Tuesday night was down fifty feet. From present appearances, they will be down 100 feet within a week from the time they commenced boring. For eight feet below the surface the hard, black asphaltum found at the top continued; after that they reached a hard, blue, sandy clay, in which they were still working. Through all this clay there are veins of asphaltum, an inch wide down to a mere thread-mark, apparently forced up to the surface by gases from below—the asphaltum being thinner as they go down.

When the mud is removed by the sand-pump an oily substance is seen floating on the surface of the muddy water, presenting varied hues. Some gentlemen from Pennsylvania visited the well lately, who pronounced the indications favorable. The progress of the work was attended with considerable interest. Many ladies and gentlemen called to see the works daily. Important developments may be expected at an early day. A correspondent of a morning cotemporary, writing at a date subsequent to the above, says that on the 28th ult. they were down 130 feet, and sinking at the rate of fifteen feet a day. The boro at that date was a tough clay. A large amount of oily matter came up with the clay, which is taken out with the sand-pump.

A Los Angeles correspondent of a city cotemporary says that there is a flattering prospect that the first dividends declared from the recently discovered oil lands and petroleum springs about Los Angeles, will be received by the lawers. Lands supposed to rest upon the city bed, have been located under the National and State Homestead and Possessor Acts, and re-located as mines under mining laws. The owners of ranches held and located under Spanish and Mexican grants, are loosening the bonds by which they were fastened upon their oily beds, and are slowing and sliding them about hither and thither, to make cover this and that oil spring, or some tract of oil land, which had been located, bought or taken up by some prospector.

PROGRESS OF THE PETROLEUM INTEREST.

We learn from Mr. Sevenoakes, who has in charge the works of the Pennsylvania Petroleum Company, that the work of boring is proceeding very satisfactorily. The well was down 181 feet at noon on Tuesday last, and the workmen were progressing at the average rate of one foot per hour, working twelve hours per day. Mr. S. brought up with him to this city a sample of the oil and water, as it comes from the well. The indications are most unmistakable. This well is located directly on the sea coast, and about six miles south of Santa Cruz. It is now about two months since Mr. S. commenced the preparation for boring, and it was eighteen days Tuesday since they commenced boring. The anger is worked by horse-power. The nature of the ground is such that no tubing is required at this well.

Mr. Sevenoakes was the first in the State to commence sinking a well for oil. His first work was under a contract with the Santa Cruz Petroleum Company, whose grounds is located some five or six miles from that of the Pennsylvania Company.

Considerable work is being done in boring for oil near Lexington, about fifteen miles beyond San Jose. The first work done was by some Portuguese, who sunk an open shaft, at first for coal, but at a depth of 115 feet the indications are such as to lead to the inference that by boring a short distance from the bottom of their shaft they will find oil.

More recently the Lexington well has been started, which has now reached a depth of 135 feet, with indications highly favorable. This well is tubed the entire distance, and work is still prosecuted upon it.

Shaw's well has quite recently been started. They are putting down an open shaft, which will be continued as such until firm ground is reached; much diffi-