## The Petroleum Industry of Canada

BY L. PASSINGHAM.

paper Syndicate, Ltd.]

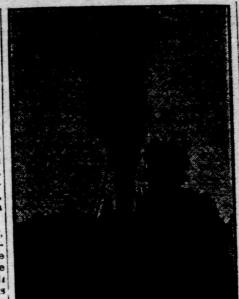
and least known sources of her age. A surface well was dug about as compared with the immense de- was found that there was plenty of velopments in the United States, and was all "surface" oil, which was a Its kind to be worked on a The result justified their work howsystematic commercial basis. There ever, as a flowing well was struck, was a previous mineral oil business in Scotland, but this oil was not got from wells, but by mining an oily and a terrific oil craze set in. Ventureshale and distilling it. Long after some spirits from far and wide Col. Potter struck the first well in journeyed through the woods of the Pennsylvania prospectors and oil men oil fields, property was taken up in all directions, and hundreds of wells -mainly Americans-were developing were soon under way. There was any the Canadian fields. In fact so great amount of excitement and undustry, was the yield of oil, which has since but very little money in those days, remained, although it is many years but everyone was confident they were since there was any possibility of on the edge of a bonanza and worked

[Copyrighted by the Canada News-| fame of the oil spread, and it did; not take long for prospectors to figure Amongst Canada's most interesting out that there must be some big reservoir to supply the surface seepis her petroleum of industry, 1863 on the edge of Bear Creek, close although of small proportions to the present town of Petrolea, and it still has had a marked effect remarkably valuable lubricant. Later the economic development of however, several adventurous spirits country. The Canadian oil resolved to try deeper down, and is really the first of several hundred feet in the rock. flooding the district with oil, which ran away down the creek.

News of the strike spread rapidly, Canadian oil competing with the with feverish energy to get their wells American product, and, in fact, a large down-and watch the oil waste itself

\*SINKING A WELL.

Putting a well down then was a



prodigality, and the production of oil became tremendous. There was as yet little market for the oil, and no means of storing it, while every day new wells drilled in flowing thousands of that in this one fire at least five built to connect with the new center visible source of power. noticed on the navigable portions of of this business, which, however, was ducing well was worth pumping. The the Sydenham River, where vessels later transferred to Petrolea. were smothered with the tarry mess. It was not long, however, before the a time there was not very much pros-

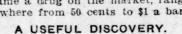
WEALTH QUICKLY MADE. Nothing, however, could stop the fineries were built, which gave some there was a big surplus in the thou- the increasing demand, until today small outlet for the immense produc- sands of immense underground tanks there are thousands of wells being pro tion, despite the fact that there was used for storing the oil, and petroleum fitably operated which do not average not a railroad within miles, and the oil became a drug on the market, ranging a third of a barrel of oil a day. all had to be teamed out Fortunes anywhere from 50 cents to \$1 a barrel. were made one day, and lost the next, and there were all the ups and downs of a typical mining camp. The popufrom the Gaspe Peninsula on the matter of tremendous labor, and took lation of Oil Springs grew to nearly

Atlantic, and the Rocky Mountains, several months, where today a well is the wealth. important petroleum sunk 475 feet with little trouble in a As an example, one flelds yet worked in Canada are those week or less. After the surface earth men of Canada today, John H. Fairof Lambton County in the south west had been bored through to a depth of bank, came to Oil Springs at that time corner of the Ontario peninsula. Even nearly a hundred feet there were 370 with very little capital besides his there, despite the utmost activity of feet of hard lime and other rock brains. He secured a small lot, and the oil men, they have been unable strata to be drilled before the oil- of course put in a drilling plant, and to keep up with the growing demand bearing rock was reached. This is a started to bore a hole in the ground. for coal oil, and the other petroleum strata of spongy brown rock from five His capital, however, was not as elastic products, and for years past over to ten feet thick, heavy with as his spirits, and he was "up against petroleum. To drill these wells in the it" before he reached the bottom, so Canada has come from the United old days a heavy drill and sinker were much so that he lacked the cash to hung in the well from a long jump-ing pole, balanced over the well on a his tools. From one blacksmith to an-It was 'way back in the early sixtles fulcrum, which gave a strong leverage. It was 'way back in the early sixtles fulcrum, which gave a strong leverage. other he went to get his drill dressed, that the Lambton County petroleum. The driller walked to the end, which but they were too busy with cash trade value. Long before white men ever letting it go down with a bang, and sented to fix his drill. Shortly after-Indians knew that it was rich in oil, which cozed out of the ground, and finished. It was an infinitely tiresome which cozed over the creaks. The charter that it was an infinitely tiresome which cozed out of the ground, and finished. It was an infinitely tiresome which creaks. The charter that the creaks the cozets of the charter that the cozets of the charter that the cozets of the cozets of the charter that the cozets of the charter than the cozets of the charter that the cozets of the charter that the cozets of the charter than the cozets of the charter than th floated down the creeks. The aborig-proceeding, but was generally richly anywhere from \$5 to \$10 a barrel. That ines used it for medicine, and when rewarded, as almost every well flowed was the beginning of his fortune. He the first settlers appeared three immense quantities of oil, which was steadily grew in wealth, became the quarters of a century ago they did then very valuable, at one time going leading oil man of his day, an immense owner of real estate, a private good for rheumatism, and as a sub- After operations had gone on for banker and a member of Parliament, stitute for castor oil. Many of the some time at Petrolea, it was found and today is rated at millions. The

rest of his life in comfort. The early days of the oil fields were full of such stories as this. But the wasteful extravagance of the early prospectors, who apparently drilled wells for the pleasure of seeing the oil float away, produced its inevitable result. The supply began to fail, and big discoveries were made at the

older Petrolea fields. The end of Oil Springs' excitement came even more suddenly than it had begun. In 1886 the Fenian Raids created great alarm, and many left the country. Not long after the underground reservoir was emptied so rapidly that a well bought for thousands of dollars one day was dry almost the next day, and the population deserted the place. Many went to the Petrolea fields, while the majority left the country for good, and within a few weeks the growing city of thousands was absolutely deserted, there being little left but an oily mess, a number of empty houses, and the first two stories of a big hotel, which REFRESHING AN OLD WELL WITH was never finished. Many of the houses A SHOT OF NITRO-GLYCERINE. | also were pulled bodily to Petrolea. For the time being Oil Springs was nothing but an ill-smelling memory. THE PETROLEA FIELD.

The Petrolea field, however, proved tion was conveyed by means of trianmillion barrels were consumed, the fire of activity, and oil refineries were This discovery once again revolutionlasting for days. The oil flowed down built to handle the output. London, ized the industry, by so reducing the to the mouth of the river, and was Ont., for a long time being the center cost of operation that almost any pro-



"jerker rods." The rods were connected oil rock at the bottom of the well would with a large wheel, which made them greatly increase the production. After the most dangerous in the whole world. are the articles that the producer has



HOW A WELL IS DRILLED TO-

more stable. The oil men had learned gles to walking-beams over the wells, more stable. The oil men had learned which worked the pumps. In this way more economic methods and recovered today as many as three hundred wells and the whole district became soaked from their original madness. Wells are hooked up to one pumping station. in oil, which floated down Bear Creek were drilled by steam engines instead It is an odd sight in the oil country to by millions of barrels, until the whole of by the old jumping pole; it was see a perfect forest of tall tripod dercreek for miles was inches deep in the found that the field was much more ricks, as many as five and six to the precious fluid. Finally this caught extensive than was at first supposed, acre, as far as the eye can see, each fire, and for miles it burned with and big flowing wells were struck in all with its pump quietly working away, inconceivable fury. It is estimated directions for a time. Railways were with slow, rhythmic motion, and no

production naturally increased, and for wells ceased to flow, and pumping had perity in the oil country. However, the to be resorted to. This meant at that demand for all kinds of oil products time that a separate pumping engine grew amazingly. Within a few years speculative fury. Drilling went on had to be installed for each well, which the surplus stores of petroleum were undisturbed, properties changed hands was so expensive that for years a well all used up, and the demands of the at fabulous sums, and on all sides the which was not good for ten barrels or refineries became insatiable—sufficient most extraordinary activity was mani- more a day was abandoned as worth- oil could not be produced. Every well fest. Speculators flocked in, and it less. Production, however, increased that would give any supply was utilizwas not long before several small re- by leaps and bounds, and for years ed, the price of oil naturally rising with

> It was, however, plain that the production was gradually falling off, and next to nothing. Those who secured most as valuable as the illuminating single pumping station by means of tonation of a powerful explosive in the ply.

fuse. A moment later a shock would ceeding in locating fresh sources of be felt through all the 475 feet of rock supply. Today there are probably close and clay, and in a few seconds a foun- upon twelve thousand wells being tain of water, oil and shattered rock pumped. Most of these, however, are would be hurled a hundred feet or more small producers, probably not averaginto the air. The result was to so ing half a barrel a day. With oil at shatter the oil rock and open the crevits present price, around \$2 a barrel. ices, that not only were the wells made and the reduced cost of operation, doubly valuable, but "dry holes" were however, the man who owns a dozen or so of these wells is pretty well off. Tofrequently made producers. Another unlooked-for result of the day a well can be put down in a week use of nitro-glycerine was the reviving at an expense of about \$100. Should it of the Oil Springs field, which resulted prove dry this is all that is lost, while in making another crop of rich men. In if it is a producer another \$200 will the rush to get away from Oil Springs case it and install a pump. oil farms were abandoned or sold for | Once produced, the oil is collected as

made, and sold for \$20 a quart at a judgment day.



found that nitro-glycerine-the most, oil, thus doubling the economic value

terrible explosive known-gave the best of the crude oil. Mr. MacMillan's in-

acteratic of oilmen, everybody wanted of the oil fields, and when a few years

their wells "shot" at once. Factories later he died he left instructions that

for the manufacture of the frightfully his body should be embalmed in paraf-

dangerous fluid were established, and fin wax - which was carefully done

the first "glycerine men" speedily grew before he was laid away in the vault.

wealthy, as the stuff was very cheaply hermetically sealed in wax till the

The system was very simple, consist- business grew, and gradually a feeling

ing merely in the filling of the well of confidence in its permanency actu-

with water, to hold the force of the ated olimen. The fields were extended

concussion; then the nitro-glycerine in all directions, and thousands of doi-

was lowered to the bottom in long tin lars were lost trying to open up new

cylinders, and exploded by dropping a pools, while others grew rich by suc-

With these various discoveries the off

suits. With the feversh energy char- vention made him one of the rich men

CRIGINAL METHOD OF KICKING A WELL DOWN.

the oilmen lived in daily dread that the them were now exceedingly fortunate. means of tank wagons, and under-The production was further increased bottom would fall out again. A fresh The wells were shot, and once more be- ground lead pipes to tanks, whence it by the discovery of a method of pump- impetus, however, was given to the came big producers, and the field took is delivered to collecting agencies, who ing a large number of wells from one business by the discovery that the de- its place as a steady source of sup- give "warehouse receipts" for it, and

jerk up and down, and this jerking mo- considerable experimenting it was and big wages have always had to be to show for his goods, and which be paid the "shooters," who also made the sells as so much oil. stuff. Considering the carelessness of It is estimated that since the open of men and boards in the distance.

THE BY-PRODUCTS.

extracting paraffin wax and lubricat- dozens of varieties of lubricating and ing oils from the tarry residue left afcovery of the new process made it al- rel produced.

look after the subsequent delivery to

the men and the enormous quantities ing of the fields more than \$30,000,000 of the explosives used, very few acci- has been invested in the producing dents have happened. It is generally trade, while many millions have been understood, however, that with glycer- spent in refining, and other lines of enine a man only makes one mistake. Af- terprise, and in fact one peculiarity of ter that there is seldom enough found the trade is that no sooner does a man of him to make material for a funeral. make a few hundreds of thousands out From time to time the factories blew of his holes than he proceeds to sink up, generally with loss of life, and almost as much money as has been put nothing left to mark the place but a into the ground in the oil business as huge hole, and a few scattered remains has been taken out of it. At present, | Canadian petroleum is worth \$2 a barrel; it yields 42 per cent of illuminating oil, 5 per cent benzine and gasoline, A fresh impetus was given to the oil while the tarry residue is converted intrade by the invention of a process of to paraffin, vaseline, axle grease, and

For years the Canadian petroleum inter the coal oil had been distilled from dustry was heavily protected by the the petroleum, which was discovered tariff. The Liberal Government, howby an oilman named John MacMillan. ever, gradually reduced this, until a This added immediately to the value of few years ago it took the duty off altothe oil, as hitherto the tar had been gether, and in its stead gave the oileither wasted or used as fuel. The dis- men a bounty of 50 cents for every bar-

## early settlers made a good deal of that there was a richer and shallower blacksmith who had aided him remainmoney by gathering the oil off the pool a few miles away at Oil Springs, ed at his forge until overtaken by old surface of Bear Creek, and peddling and the original fields were deserted ago, and then came Mr. Fairbank's in a general rush to the new field, turn. The blacksmith was remembered This did not last long, however. The Wells were put down with wasteful with a pension, which kept him the It in medicine bottles. THE INVENTOR OF THE TELEPHONE: STORY OF PROF. ALEXANDER BELL

A COMPLETE MODERN DRILLING OUTFIT.

proportion of the oil burned in Canada on the ground and down the creek.

has been imported from the States.

Although "shows" of oil have been

OIL IN LAMBTON.

The First Experiment in the City of Brantford—Telephone Then until the former was tired of the play-Regarded as a Scientific Toy-Love Romance of the Inventor.

one day in 1871 the hero of Brant was but a step to applying the same County, Canada. He was Alexander idea to spoken words, and the tele-Graham Bell, a Scot, who had moved phone, in crude form, was the result. from Edinburgh to the Dominion the Soon after Prof. Bell moved to Bosprevious year. He had invented a con- ton, a wealthy Cambridge man, Hubfor a considerable distance. This "tele- soon followed. Miss Hubbard and her phone," as young Bell called his in- father became deeply interested in the vention, was regarded as wonderful and telephone, and Bell was induced early highy amusing toy. Nothing more. The in 1876 to patent it. country folk turned out by the hundreds to witness the first experiment. of the Massachusetts exhibit at the A wire had been stretched from the Centennial Exposition in Philadelphia. house of Bell's father in the suburbs He wanted Bell to place before the to the telegraph office in the city of people in the Massachusetts building Brantford, two and a half miles away. his marvelous scientific toy. The test was successful. Bell was But Bell did not care to do this praised, though some of the graver

the outer world. This was his intended as well as his luggage was shipped to life work, although as a boy he had him by the next train. at the opposite end, noises on one set could be reproduced by the other. hands effusively with him and asked this belief he secured an agency for the

trivance by which human speech could bard by name, sent his deaf daughter he carried across a single wire and to him for vocal instruction. An entransmitted with perfect distinctness gagement between pupil and teacher

Mr. Hubbard was placed in charge

probably failing to realize the import-Canadian Scots thought he might have ance of such a step. Miss ' Hubbard far better spent the time on something added her plea to her father's. When all other means failed she asked the He went next year to Boston to ac- inventor to come to the station and see cept a professorship in the university her off for Philadeiphia. As she was From boyhood he had devoted about to board the train the burst into himself to a system, devised by his tears and begged her sweetheart to father, for teaching deaf mutes to come to the Quaker City with her. He communicate with each other and with yielded; and the telephone apparatus

longed to be a musical composer, and But only half the battle was won. had with difficulty been persuaded by Before the telephone could be exhibited his father to give up that ambition. a committee must pass on its merits il, when a mere lad, conceived the It was late in the afternoon when the idea of forming a system of harmonic tired committeemen reached the Bell telegraphy. He found that sounds could invention. They were on the point of salesman of distinctly novel variety. be carried over wires that were joined deciding such a toy did not deserve a He lives in the prairie section of the to a galvanic battery, and that by ad- place in so dignified an exposition when middle west, and when gasoline engine justing a set of reeds at one end Dom Pedro, Emperor of Brazil, chanced began to approach their present practica-

ed during a recent visit to Boston. wagon, from which he removed the pole. He went on to insist that Bell let him talk through it at once. Accordingly, potentate and inventor shouted lines according to Spare Moments. One shaft,

of Shakespeare back and forth to each all the mechanism necessary in order for

farmer-like youth of 24 found himself receiver of music notes. From this it of eager visitors throughout the course the machine will do. of the Centennial. But before Bell As a result he sells more engines than all lar inventions, and for years the fight tory is limited only by his speed. waged in the courts. At length Bell won. It was said at one time that he gave Miss Hubard as a wedding present when she married him, the royalty rights on the telephone. These

rights, of course, have accumulated to a fabulous sum. Apart from this great device Bell invented the graphophone and in 1880 the photophone, an instrument for repro ducing and recording speech by light vibrations instead of by wire. This apparatus has been made to carry sound 700 feet, but is not yet in prac-

tical use. Despite the wealth his inventions have brought him, Prof. Bell still devotes himself to the welfare, education and advancement of deaf mutes, whose former pitiable condition he has improved as vastly as his more famous device has enlarged the scope of the To the efforts of a deaf girl who had

sublime faith in her sweetheart's genius the world owes the Bell telephone AN INGENIOUS DRUMMER.

His name was Barnes. Until recently he

VIEW OF OIL FIELDS AND TANK WAGON GATHERING THE OIL.

He carries a pump jack and a small as-The imperial approval had turned sortment of small pulleys, so arranged as the tide of fortune for Alexander Bell. to be capable of attachment to churns, The committee promptly decided that washing machines and the like. His out-New York World: A big-hearted, Thus, each could be a transmitter and time before the problem of which has advertising value; while was accepted and attracted multitudes show his prospective customer just what set children to screaming, plowed its

could put it to practical use, a number other agencies in his territory; and as he of other men claimed credit for simi- carries his office in his pocket, his terri-



First Dentist-Do you have any trouble collecting your bilis?
Second Dentist—Yes, it's like pulling teeth to get money out of some pee-

## him a number of questions concerning one he considered best, procured a samthe telephone, which he had seen testing the telephone, which he had seen testing the telephone of questions concerning one he considered best, procured a samthe telephone, which he had seen testing the telephone of questions concerning one he considered best, procured a samthe telephone, which he had seen testing the telephone of questions concerning one he considered best, procured a samthe telephone, which he had seen testing the telephone of questions concerning one he considered best, procured a samthe telephone of questions concerning one he considered best, procured a samthe telephone of questions concerning one he considered best, procured a samthe telephone of questions concerning one he considered best, procured a samthe telephone of questions concerning one he considered best, procured a samthe telephone of questions concerning one he considered best, procured a samthe telephone of questions are the telephone of questions and the telephone of questions are the telephone of questions and the telephone of questions are the telephone of questions a RICHARD TREVITHICK, A MINER

other across a limited stretch of wire the engine to drive his combination at the The First Engine a Rickety, Noisy Affair - George Stephenson's Improvements-The Work of Peter Cooper in America.

> way through the streets of London one genius. He perfected a high-pressure this line. His knowledge of coachday in 1803. It was called a "steam lo- non-conducting steam engine and made making, as well as his trend for comotive," and consisted of a four- the first locomotive. This was a rickety, originality and natural definess, came wheeled carriage bearing one of the noisy, slumsy affair. Nevertheless, it to his aid. In 1830 he built, from dethen new high-pressure engines; a six- was the forerunner of every locomotive signs of his own making, the first lofoot boiler, a single 54-inch cylinder, since made. It could carry, in a sort of comotive ever manufactured in this and a great stack from which gushed chaise, fifteen passengers. Trevithick country. The Baltimore and Ohlo a torrent of black smoke and fire. Guid- described it in his application for a Railroad was in course of construction ing this welrd contrivance was a patent as "a steam engine in a pro- and the road's promoters were in grave g gantic, plain-featured man-Richard pelling carriage." Previthick, an uneducated Cornish

When the practical use of steam was pelled to give up the idea of making it building railroads on small capital and still a new thing, Sir Isaac Newton popular. The public at large sneered saved the Baltimore and Ohio from and prophesied that some day this old at it, called it a freak, and predicted bankruptcy. His first locomotive was power would propel wagons, taking the that it would come to nothing. Never-called the "Tom Thumb," and it led place of horses. But no one took much theless, during the next quarter-cen- the way for America's supremacy in stock in the forecast. Nearly a hun- tury other men added at times, little engine building and other railroad dred years had passed before the idea by little, to the device's effectiveness; affairs. was taken up. Then, in 1769, a scien- and, in 1822, an English miner, George Nor was this the greatest service tist, Cugnot by name, made a road wa- Stephenson, succeeded in making the Peter Cooper rendered to his country. gon, driven by steam. But it was not first locomotive along modern lines. In Remembering how hard he had been practicable, and was regarded merely 1825 the first railroad, with one of his forced to struggle in order to gain an as a plaything. It frightened horses so locomotives drawing a train over its education and instruction along inbadly that a man with a red flag was tracks, was opened. This was an dustrial lines, he resolved that New always sent ahead of it to warn riders epoch-marking event in the History of Yorkers of the future should have an and drivers. Fifteen years later a Brit- Progress. The public was forced, re- easier method of obtaining these than ish inventor, Murdock, made a second luctantly, to admit that the invention any he himself had known. With this of these steam road wagons. This, too, had come to say. To England belongs end in view, he built and endowed, in was a failure. Both Cugnot's and Murthe credit of this wonderful innovation. 1857, the great building known as dock's devices were more the ancestors Next came the exporting on trial, of Cooper Union, for the providing of free of the automobile than of the locomo-

sight of which made women swoon and trict. Although he was too stupid to iron business in Maryland, at once

of his discovery Trevithick was com- Cooper demonstrated the possibility of

a few locomotives to America. Here teaching in art and science and free the plan was also violently opposed. reading-room and library for the peo-It was not until 1800 that the real People declared the sparks from the ple. "father of the locomotive" made his stacks would set fire to cities and farmreputation by adding important im- of grazing sheep. It was at this junc-

more education that did Trevithick. As a boy he worked for his father at makcoachmaking trade. This later acquirement was destined later to be of use to him along a broader line of endeavor. He, like Trevithick, was a natural inventor. A cloth-shearing machine, a patent glue and many other unique inventions started him on the road to fortune. He had already won fame as a man of original ideas when the question of the locomotive importation came up.

A curious and fearsome object, the wrestler and weight-lifter of the dis- Cooper, who had recently entered the doubt as to whether there would be a But after proving the practicability reasonable profit on their investment.

Cooper Union stands, and shall stand first test along this line. He was Tre- houses, and that the smoke would as an immortal monument to the man vithick, and he had already made a blacken and render worthless the wool who not only made the first American locomotive, but who made it possible provements to Watt's steam engine. ture that Peter Cooper entered the lists for other poor boys to acquire an edu-Trevithick, besides being a giant in as a progress maker. cation along lines that would qualify Stature, was the "strong man" of, Peter Cooper was a self-made New them also for place among the world's Cornwall. He was the champion boxer, Yorker, born in 1791. He had little progress makers.—New York World.