

become better equipped for the struggle, but to declare to the world that the struggle was their own, and not brought about through an invasion. They proposed to have a new flag, so that there should be no question of the independence of the movement. Dr. Jameson, however, became impatient, and appears to have disregarded either the requests of the committee or the warnings of the Imperial Government, who wired him as soon as they heard of his intention. The reader will remember how his force of 400 or 500 men were caught by a Boer force of three times his number before he reached Johannesburg, and compelled to surrender, the leaders in the movement at Johannesburg being unaware of his approach till too late to do anything. These leaders were arrested, and, as we know, heavily fined, the fines aggregating over a million pounds, and were bound over for three years not to take any part in the politics of the Transvaal. Their tongues were, therefore, tied, and hence the false impression that has been current regarding this affair. With his characteristic cunning, Kruger sent, as mediators, three men in whom the Johannesburgers had faith, and by promises of reform, made on his behalf through them, but which he had no intention of keeping, the people were induced to lay down their arms, hoping for redress at last. The President saw that the reformers had lost the sympathy of the outside world, through Dr. Jameson's mistake, and he took the fullest advantage of the fact. He at first pleaded for delay in the execution of the reforms till the excitement of his burghers should be allayed, and when this plea was somewhat worn by time, he repudiated the promises made to the mediators. An ever-increasing revenue, squeezed from the gold fields, enabled him to add to his forts and armaments, and the Jameson raid furnished the excuse that had been wanting before. In the case of Pretoria, the capital and centre of Dutch influence, the guns were mounted pointing outward; in the case of Johannesburg, the Uitlander city, they were placed so as to bear upon the town itself. Taking advantage of the sympathy naturally aroused in the Orange Free State, he drew that republic into a formal alliance by which it bound itself to join the Transvaal in any war that might arise. Before the Jameson raid, official Boerdom was insolent enough in its dealings with aliens, but after the raid, matters grew worse.

ENTER THE STANDARD OIL COMPANY.

Many of our good friends in Petrolia seem to have taken our reference to the Standard Oil Co.'s doings in Petrolia as a reflection upon the policy of the town authorities. This is shown by the letter from Petrolia in another column. Nothing could be farther from the writer's intention. We understand that the first deal by which the great oil monopolists obtained possession of Rogers, Fairbanks & Co.'s refinery was accomplished before the people of Petrolia were aware of it, and even if they had been they could not have prevented it. When the Imperial Oil Co. of Petrolia at first declined to sell out, the Standard Oil Co. took indirect, but none the less effectual means of getting their grip on the Canadian oil trade. They not only obtained from the Canadian railways a discrimination in freight rates against Canadian producers, but induced the Dominion Government to permit the importation of oil in ship tanks and cars. Before this, petroleum and its

by-products had to be imported in cans or cases of not more than fifty gallons, and duty was charged on the cases. Inspection was also required which so restricted the imports as to give the Canadian refiner at least a fighting chance. When the Standard Oil Co. sought to break down these barriers deputation after deputation from Petrolia and other oil centres went to Ottawa, showing that such a change would ruin the Canadian oil trade as an independent industry, and would sooner or later deliver the business into the hands of the American monopolists. Their appeals were unavailing, but the prophecies were speedily fulfilled; for when the Imperial Oil Co. found itself in the ditch it sold out to the Standard, and the other small refineries had to follow.

The discrimination made by the railways in favor of the American corporation has been gratefully rewarded by the withdrawal of as much of the oil transportation business as it can divert to its own vessels. Once having become possessed of the Canadian oil business the Standard Co. could not be blamed for piping its crude oil from Petrolia to Sarnia, because with the facilities of shipping in tanks which the Government has given it a great saving could be effected by having its works along the water front at the Detroit River. As to the increased price which the Standard Co. is paying for crude oil, the fact will not be lost sight of that the price the company now charges for refined oil, gasoline, benzine, etc., has been advanced about ten times the proportion of the advance in crude oil. However, it is assuring to know that the enterprise of Petrolia's citizens is carrying the town ahead in spite of fate.

AMERICAN STEAM WAGONS.

Aside from the Serpollet system of flash boiler steam engines for light vehicles, which is successfully used in European countries, steam power was used exclusively for freight wagons and heavy constructions of other descriptions until a number of New England men, mostly engaged in other forms of machinery manufacture, evolved designs of boiler and engine which have made steam available for the lightest class of road wagons. By the success of their experiments they created a new type of light vehicle, which is characteristic for this country, and is already commanding intense interest in Europe. George E. Whitney, of Boston; A. T. Cross, of Providence; William B. Mason, of Milton; The American Waltham Manufacturing Co., and the Waltham Manufacturing Co., both of Waltham, and the Stanley Brothers of Newton, were the pioneers in these improvements of steam engines, closely followed by others, who are all indebted to the early experiments of S. H. Roper, who commenced his experiments with light steam engines over twenty years ago, and continued them until his death in 1896. To this common origin in ideas, says *The Cycle Age and Trade Review*, may be traced a certain sameness in construction of the engine part of the various wagons produced, but notwithstanding this partial similarity, each of the patterns has a pronounced individuality due to the great variation in running gear and details which are of the greatest practical importance for the management and operation of the vehicle.

Whitney in his experiments with yacht boilers found that the single vertical tubular boiler, with flues 26 diameters in length, produce more steam per pound of boiler than any other form of steam generator with which he experimented, and he has adopted as standard this ratio of dimensions. The dimensions of the boiler are: Total height, 20 inches, with a body diameter of 16 inches. Whitney uses copper tubes $\frac{1}{2}$ -inch in diameter, and about 300 in number. The boiler shell and fire-box are of steel, about 1-10-inch in thickness, and the completed boiler, which weighs about 85 pounds only, is tested to 500 pounds hydraulic pressure. The steam pressure used is not high, only about 125 pounds commonly.

In Mason's wagon the same style of boiler is used as in the Stanley and American Waltham wagons, the design being