done with a man who believes (as Kruger argued with Dr. Hertz, and a deputation of Johannesburg Jews, who came last year to plead for educational freedom), that the Boers are the direct descendants of Isaac, and the Jews the descendants of Ishmael, and that, therefore, it would be against the Scriptures for both people to inherit the land together! It must also be understood that, whatever the Boer leaders know, the Boers themselves are convinced that when the Gladstone Government gave back the country in 1881, it was through fear, and that the profession of generosity or justice was merely a cloak for this fear. And they point, in confirmation, to the fact that when Mr. Gladstone, after denouncing the annexation, in his Midlothian speeches in Opposition, came into power, he refused all along to restore the Boer Government until he had the experience of Majuba Hill. The leniency with which the British Government treated the Transvaal in its repeated violations of the two conventions, and the way in which they were allowed to despoil the Swazi tribe, were to the Boer mind only so much accumulating evidence of this fear, apparent to him as the years went on. Perhaps Kruger himself thought the Transvaal was a match for Britain, as J. P. Fitzpatrick relates the following, in his "Transvaal from Within:" "The late W. Y. Campbell, as spokesman of a deputation from Johannesburg, addressing President Kruger, stated in the course of his remarks that the people of Johannesburg 'protested' against a certain measure. The President jumped up in one of his characteristic moods, and said: 'Protest! Protest! What is the good of protesting? You have not got the guns! I have.' And Mr. Campbell, in reporting this in Johannesburg, remarked: 'That man is sensible; he knows the position. I claim to be sensible, also, and I know he is right; you can take my name off any other deputations, for we'll get nothing by asking.'"

We have evidence that several members of the Raad would have given the Uitlanders, not all, but some of the rights they vainly sought, but Kruger had become too powerful an autocrat, and they were no match for him either in diplomacy or determination. But though the Boers were ignorant, they were not so ignorant as to fail to realize that if the franchise was granted to Uitlanders, and a clean, honest administration inaugurated, these "doles" to burghers would cease, and they would no longer be able to live in ease at the expense of the hard-working alien. Hence, their determination to do what would otherwise appear insane—to risk the destruction of the Republic itself rather than to do justice at the cost of giving up control.

(To be continued).

CANADIAN NICKEL-STEEL.

The nickel-steel age, spoken of by Prof. Roberts-Austin before the British Association for the Advancement of Science, as being the next great period in the industrial progress of the world, is now entered upon. The most learned metallurgist in the world, whose opinion we have just quoted, also predicted that Canada would take a leading part in the developments which would characterize that epoch. There is no reason why the nickel-steel supplies of the world should not come from Canada. We can make iron cheaper than anywhere else in the world. We have the greatest and cheapest nickel supplies, because Canadian nickel contains enough copper to pay for getting it out and treating it, therefore the nickel-steel can be produced by us at prices which defy competition.

Hamilton, Ont., is to be the seat of great metallurgical industries. To the iron smelter and rolling mills already there, is now being added the Hoepfner Refining Co.'s works, which will refine zinc, copper and nickel. To operate this plant 3,600 electrical horse-power will be required, which will be furnished by the Cataract Power Co. J. Patterson stated publicly on March 1st, that contracts had been made with the Canadian Nickel Company, the Nickel Copper Company of Ontario, and the Hoepfner Refining Company, for the refining of nickel matte, the contractors to supply sixty tons of matte a day to the Hamilton works. As soon as the Hoepfner Co.'s plant is an accomplished fact, which will likely be in the coming spring, the nickel-steel plant will be started, and the cost of the buildings and machinery will be about $6,000,000.

For THE CANADIAN ENGINEER.

PEAT AS FUEL IN CANADA.

BY A. G. ARDAGH.

Peat or turf is usually associated in our minds with the old home-land, but there are many who do not know that in our country we have peat bogs of similar character. Swamp land, as we know, is widely distributed in the Dominion, but the product is not recognized by old country people as turf, which is generally the product of mosses; of the latter there exists, nevertheless, large deposits in Ontario and other Provinces. Both kinds of peat can be utilized as fuel. These peats are decomposed mosses, sedges, aquatic plants and other vegetable matters. Dana says: "In temperate climates it is due mainly to the growth of mosses of the genus sphagnum. This plant forms a loose turf, and has the peculiar property of dying at the extremity of the roots below while it continuously grows and increases above the surface, and by this process a bed of great thickness is gradually formed." In "older" peat there are a few traces of fibrous matters, but it presents a pitchy, shining hue when cut. It will dry out more or less brown. In "recent peat" the fibrous condition is closely marked and the color brown.

In general the older peat is underneath, but the lower stratum may be immature peat. This is the case in the Ellice marsh, nine miles north of Stratford, Ontario, where there is a bed of several thousand acres of sphagnum peat about six feet deep. The moss has been burnt off the surface long since. On the great bog in the County of Welland a number of acres are still covered with the original sphagnum moss. It is curious that these marshes are usually to be found on the watersheds. Peat contains in undrained marshes about 90% of water. It parts with its water very slowly on exposure to the air when in the shape of bricks and out of contact with the bog. On the peat moors of Ireland, Scotland and Northern Continental Europe, turf has been, since time immemorial, cut out in brick form and marketed locally in its crude state, although previous to this many fruitless efforts have been made to compress it economically and on a commercial scale. In this way the