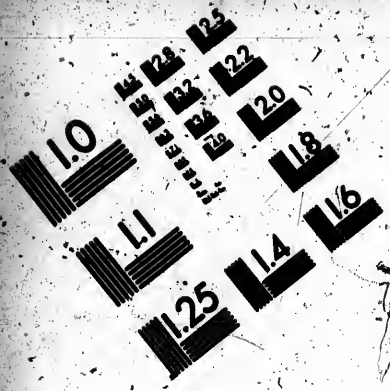

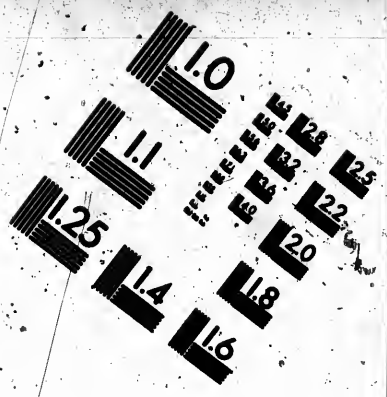

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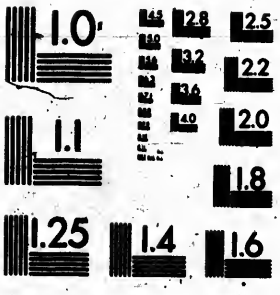

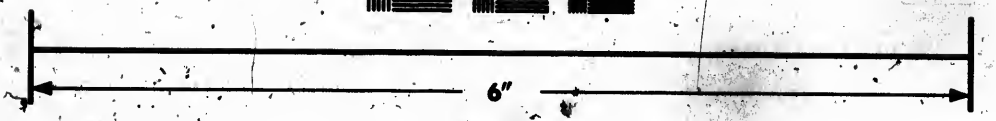

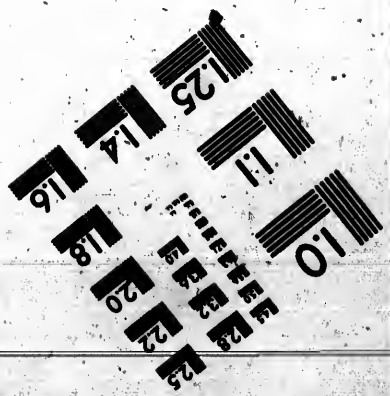

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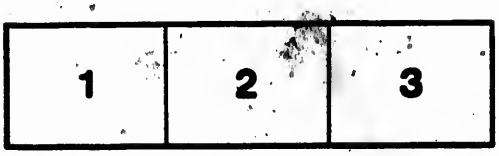

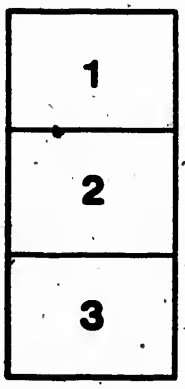

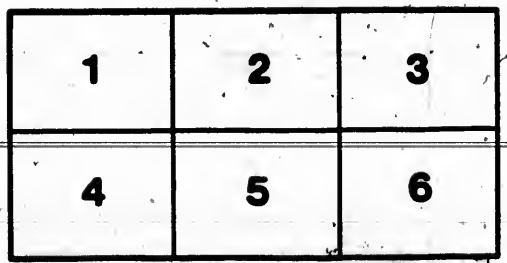

The Huron District Peat Company.

IT IS PROPOSED to form a Joint Stock Company to operate in the Counties of Perth and Oxford for the manufacture and supply of compressed peat fuel, under the patents granted A. A. Dickson, of the City of Toronto, Manufacturer, which have been acquired by "The Canadian Peat Fuel Company." The patents expire in January, 1916.

The proposed company is to have the exclusive right to manufacture and sell in the districts as may be defined, within the limits of the above Counties or such other territories as may be acquired.

THE ESSENTIALS FOR OPERATION ARE:

(1) Peat bogs of sufficient extent to guarantee a supply of the raw material for an extended term.

(2) A plant comprising:

(a) Facilities for excavating the peat, either by dredging or by hand labor, and drying it in the open air until it retains a degree of moisture approximately corresponding to that of the atmosphere.

(b) Portable tracks and light trams for conveying it to the factory.

(c) Breakers for grinding the peat to a powder.

(d) The patented machine for compressing the powder into cylindrical blocks (of uniform length under normal conditions).

(e) The carriers necessary to the transfer of the crude peat and the manufactured fuel to the proper points without manual labor.

(f) The power to drive the machinery.

(g) Storehouses for the winter's supply of crude material and for a stock of the manufactured fuel.

Process of Manufacture.

A pamphlet, issued by the Canadian Peat Fuel Company in reference to the manufacture by the Dickson process, refers to the mode of drying the peat, which can be satisfactorily done by the natural process in the open air, or, if found desirable in certain conditions, under [illegible] and then proceeds as follows:

"REDUCING.

"The next step is the reduction or disintegration of the dried mass until it assumes a loose character, finely divided, yet preserving the fibre free from any undue fracture, and without liberating any of the indigenous or inherent combustible matters. (It must be remarked here that his is the only process which does not require the picking out of the smaller roots and sticks previous to compression, as they can all be simultaneously broken up and incorporated with the smaller fibre, thus saving trouble, expense and waste.)

"PRESSING.

"This dry, cold and disintegrated material—contrary to public opinion—offers more resistance and friction against compression and consolidation than any other natural ligneous substance known, and discontinuing all attempts to press it against any fixed resistance or in any closed mould, Mr. Dickson devised and constructed his Patent Open-Tube Vertical Press, which, with moderate expenditure of driving power, and with only two formers or dies working against a yielding resistance, has an output of 1 1-2 to 3 tons of pressed peat per hour. The charges are evenly-disposed automatically and gravitate towards the dies, and the formative pressure is always the same, irrespective of any varation in density of the successively fed charges of material. The reduction of bulk from the raw material to the finished block is in the proportion of 6 to 1.

"PRODUCT.

"The result of the foregoing cold dry process is the transformation of peat into blocks of fuel, each of which may be described as a novel article of manufacture, in the form of a hard dense block, containing all the fibrous carbonaceous, volatile and other materials and elements which are originally embodied in the raw peat, and an amount of moisture only corresponding approximately with that in the surrounding atmosphere.—

"ADVANTAGES.

"The compressed peat fuel has the following advantages:

"Intense heat.
"No sulphur.
"No clinkers.
"No soot.
"Very small ash residuum.
"Practically smokeless (when burned under proper conditions.)
"No gas deleterious to animal or vegetable life.

"The percentage of moisture to which the inherent moisture of the peat is reduced will, of course, vary somewhat, according to the humidity of the atmosphere existing at the time and place where the fuel is manufactured, but the following general analysis of the manufactured peat fuel may be taken as a fair average.

"Moisture	12
"Volatile matter	58.20
"Fixed carbon	26
"Ash	3.80
	100.00"

Remarks on the Fuel.

The diameter of the cylindrical blocks of fuel will vary with that of the forming dies.

Bituminous coal may be said to weigh 73 lbs., anthracite 93 lbs., while compressed peat made from the Ellice bog in September, 1898, weighed 83 lbs., per cubic foot and would require only 35 cubic feet space to store one ton. The loss in transit will be inappreciable; the fuel is not injured by frost; it will not absorb moisture from a damp atmosphere, although a heavy shower would no doubt affect it, and thus it has been considered necessary to provide a covering for the fuel in store.

There is no doubt that a higher efficiency for steam raising can be

obtained for the fuel by slight changes in the grate bars, &c., but the cost of the change will be slight.

For domestic use in grates and furnaces the grate bars may be blocked in some suitable and inexpensive way to prevent the fine peat coals from passing through, till special grates are on the market, when a change may be made, although not absolutely necessary.

TESTIMONIALS.

Testimonials of an eminently satisfactory nature have been received from gentlemen in Stratford, which are on file for examination. These refer to the domestic use of the fuel, but as to its steam raising qualities, we reproduce the following:

TEST OF PEAT FUEL obtained from Township of Ellice, made at Stratford water works plant, Sept. 28, '98:

CONDITIONS OF TEST.

No. 1 boiler, coal fire was drawn at 3 p.m., two pine slabs thrown on grates served to kindle peat fuel. No. 2 boiler was treated similarly, but no kindling was used, the peat fuel ignited from the hot bars. The steam gauge registered 17 lbs. In 13 minutes the steam rose to 60 lbs, and was held remarkably steady throughout the test. The water level of boiler averaged 4 inches. Temperature of feed water 170 degrees. Reading of vacuum gauge, temperature of feed water and pressure of water guage was taken every hour. Peat fuel consumed per hour 310 lbs. Water pumped per hour 31,005 imperial gallons. Ash and unconsumed peat 7.5 per cent. I have no hesitation in saying that fully 15 per cent. of the peat fuel was lost owing to the excessive distance from grates to boiler. Had I known the nature of this fuel I should have recommended the raising of the grates fully 7 inches, a much finer grate bar and an automatic dampar.

TRIAL OF SELECTED REYNOLDSVILLE COAL, September, '98.

No. 1 boilder was drawn at 3 p.m., 50 lbs. of pine served to kindle. No. 2 boiler was treated similarly; 50 lbs. of pine served to kindle. The steam gauge registered 52 lbs. The water level of boiler averaged 4 inches. Temperature of feed water, 170 degrees. Reading of vacuum gauge, temperature of feed boiler, and pressure of water was taken every half hour. Coal consumed per hour, 300 lbs. Water pumped per hour, 30,080 imperial gallons. Ash 8.9 per cent.

(Signed) THOMAS CLARK,

Mechanical Engineer and Manager Stratford Water Works.

The recent test on the Central Ontario Railroad demonstrated the suitability of the fuel for locomotives. The Grand Trunk used the crude material for some time in earlier days and abandoned its use only for reasons which do not apply to this fuel.

Locomotive engineers testify to the lessened deterioration of flues, etc., by the use of peat instead of coal.

MANUFACTURING LOCATIONS.

In the County of Perth, within five to ten miles of Stratford, there are bogs of several thousand acres in extent, at present waste land, pre-

senting an aggregate of features for easy exploitation possessed by very few bogs in the Province, by reason of accessibility, a clean and untimbered surface, uniformity of depth, consistency of peat, and favorable drying ground. So far as information is obtainable, there are other bogs in the district, from which the fuel could be profitably taken and manufactured.

MARKETS.

The annual consumption of coal in Stratford has been estimated approximately as follows:

	Tons.
Anthracite—	
Domestic consumption	11,500
Public buildings	400
Bituminous—	
Domestic consumption	600
Factories	2,900
Grand Trunk Railway	60,000
Bituminous slack	1,700
In St. Marys—	
Anthracite	3,300
Bituminous	2,700
In Mitchell—	
Anthracite	2,500
Bituminous	2,000

Approximate population of the foregoing and other suggested markets, in connection with the Ellice bog:

Perth County.		Oxford County.	
Stratford	10,000	Woodstock	9,300
St. Marys	3,000	Ingersoll	4,500
Listowel	2,700	Drumbo	700
Mitchell	2,300		
Tavistock	1,000		
Milverton	900		
Shakespeare	550		
Millbank	500		

From these points a certain amount will also be distributed in the surrounding country.

CAPITAL.

The amount of capital needed will depend on the operations proposed by such company as may be formed. The "Steam Machine" carries its own steam cylinders, and will have a producing capacity of at least three tons per hour, but this may in all probability be materially increased. The "Gear Machine" needs an engine as well as a boiler, and will produce

1 1-2 tons per hour. The annual product of one steam compressor, or two gear machines would be about 15,000 tons if run twenty hours per day for 250 days.

The Canadian Peat Fuel Company require, in general terms (with certain provisions for protecting the manufacturer), that the demand for the fuel shall be supplied.

It is here proposed that a plant consisting of at least two steam machines shall be established on the Ellice bog, which is favorably situated for supplying the Counties of Perth and Oxford, and has an abundant supply of material for a large market wherever obtainable. The Grand Trunk, using 60,000 tons annually, would require the output of four steam machines.

Estimated capital for plant comprising two machines of the steam type with a combined capacity of at least six tons per hour, or thirty thousand tons per year of 250 working days of 20 hours each, as follows:

PLANT.

NOTE.—Refer to Pamphlet printed by undersigned for further details.

Machine shed, machinery and installation	$12 000	
Storehouses for 20,000 tons of crude peat	18 000	
Storehouses for 7,500 tons of product	2 700	
Track (4 miles), 16 trams, locomotive (3-4 H. P.)	5 500	
Dredge, distributor, etc., 2 sets at $4,000	8 000	
Switch (nominal distance)	300	
		$46 500

RUNNING EXPENSES, (WITHOUT REVENUE).

Excavation (by steam), drying and tramming from May 1st to Sept. 30th; 30,000 tons at 65c	$19 500	
Manufacture, (including oil and repairs). June 16th to Sept. 30th, 8,800 tons at 25c	2 200	
Freight and delivery on 4,400 tons at 61c	2 684	
Office expenses, etc., on 4,400 tons at 20c	880	
		25 264
		$71 764

PEAT LANDS.

The peat deposits will be partly purchased and partly leased.

N. B.—As it is proposed to limit the initial cost till the market is tested, the operations the second year will doubtless command sufficient credit to reduce this estimate of the required working capital very materially, probably below $60 000.

No appropriation need be made for clearing in the Ellice swamp, and the drainage is fairly well effected, but the payments thereon are still current and will be payable by the lessees.

The bonuses payable to the C. P. F. Co. are chargeable against the undersigned, and are not to be included in the capital.

Dwelling houses and boarding house will probably be necessary, but it is consid-

ered that arrangements can be made whereby the cost of erection need not be included in the capital account.

The number of men excavating, drying and tramming would be about 125.

To manufacture in the summer only, would have its advantages as well as its disadvantages, involving, among other things, the purchase of more than twice the amount of machinery, but obviating the necessity of erecting so much storage, besides lessening the cost of production under certain heads.

ESTIMATED COST OF PRODUCTION AND DELIVERY PER TON.

N. B.—Ordinary labor is placed at 12½c per hour, which covers all the labor items except manufacture, managing and foremen, and two men on the dredge, where higher rates are figured on. (See "Notes on the Manufacturing of Compressed Peat Fuel, etc.")

Compressor of Steam Type.	One Machine.		Two Machines and Steam Excavator.	
Cutting and Spreading	.45		.10	
Turning and stacking	.30		.40	
Tramming, 16c, storing, 1c	.17		.10	
Foremen over above	.04		.02	
Incidentals	.04		.03	
		$1 00		65
Unstoring crude peat (by carrier)	.03		.02	
Manufacture and repairing (labor)	.13		.09	
Fuel (cost of collection)	.07		.06	
Repair material, (including excavator)	.02		.03	
Oil, waste, etc., (including excavator)	.01		.02	
Incidentals	.04		.03	
		30		25
Loading into cars (by elevators)	.01		.01	
Freight, 10 miles	.35		.35	
Delivery in town	.25		.25	
Manager, office expenses, insurance and incidentals	.25		.20	
		86		81
Royalty to C. P. F. Co		25		25
Total cost delivered to small consumers		$2 41		$1 96
Deduct delivery and half office expenses, (to give as below)		37		35
Total cost at factories (cars on switch)		$2 04		$1 61
		35		35
Total cost at works (on cars)		$1 69		$1 26

Additional freight charges must be added for points beyond Stratford.

PRELIMINARY OUTLAY (to July 30th, 1899).

Buildings for machinery and timber foundations for compressors and boilers	350
Steam compressor, $2,500, two breakers, $400	2 900

Boilers, (2), 50 h.p. each (locomotive type), feed pipe, steam pipes, smoke stack, etc	1 500	
Carriers, elevators, hoppers, feed box, chute and tank	150	
Belting, shafting, pulleys, etc	200	
Tools, $50, freight, $100	150	
Installing all machinery above mentioned	350	
Inspection, travelling and incidentals	300	
		5 900
Storehouses for 500 tons of product	200	
Tracks (half mile), $600, 3 trams, $100	700	
Switch from G. T. R	300	
		1 200
Running expenses (without revenue) to July 30th, 1899:		
Excavating and drying (by hand) from May 1st, 2000 tons at 83c	1 660	
Tramming and manufacturing from July 16th, 1000 tons at 47c	470	
Freight and delivery on 1000 tons at 61c	610	
Office expenses and incidentals	410	
		3 150
		750
Peat lands, payment on account to Canada Co		
		$11 000

ESTIMATED ANNUAL OUTLAY.

Cost of production and selling 5,000 tons to factories at $1.61	8 050	
Cost of production and selling 25,000 tons to small consumers at $1.66	49 000	
Extra freight at an average of 10c per ton on 30,000	3 000	
Depreciation on $46,500 at 8	3 720	
		$63 770

Add for payment to lessors of the peat lands and to the owner of the franchise.

ESTIMATED ANNUAL RECEIPTS.

Sale of 5,000 tons at $2.50	12 500	
Sale of 25,000 tons at $3.25	81 250	
		$93 750

This does not take any account of the railway market. To supply this alone there would be required a plant of value about $85,000.

The selling price, as stated, is not given as indicating the value of the peat relative to the fuels in use.

ARTHUR G. ARDAGH.

Stratford, Ont., Feb. 1st, 1899.

The Huron District Peat Company.

Prospectus.