

E. JÄRNEFELT,
Björneborg.

Finland (Russia) Björneborg, ~~the~~ 5th September 1899.

Telegrafadress:

JÄRNEFELT, Björneborg.



Hochwohlgeboren Herrn Professor
von Lang
Wien.

Esteemed Professor!

I take leave to point out, though I am unknown to you, have utterly important it were to be able to draw out azote from liquid air in order to use it as manure.

Great quantities of "Nitrate of soda" is from Chili imported to Europe. It is worth 7 to 8 English pounds per ton.

If it could be produce cheaper Europe should at least want about 20 million pounds worth of it.

"Nitrate of soda" consists of:

63,3 parts of nitric acid

36,7 " " natron.

Nitric acid contains:

1 equivalent of azote 14

5 " of oxygen 40

54.

"Nitrate of soda" should consequently contain 16,41% of azote, but as there are found some impurities in the manure it contains generally only 15% of azote.

Cannot you have charcoal, dry peat soil or soda or natron to join with the azote of liquid air?

Perhaps it would join with the cheap common salt?

Sulphuric acid joins also with ammonia which contains azote.

Professor W^m Crookes, of London, mentions that azote can be burned by great electric heat.

The matter I here mention is of greatest importance. Cheap azote means 15 to 25% higher crops all over the civilised world.

I can only advise you to make experiments, and I were glad to hear of the results.

To use liquid air for blowing up rocks is comparatively of much less importance.

Don't you know any one at Vienna, who should wish to buy

Waterfalls (Wasserfaller) here in Finland? I have some thousands



of horsepowers for sale. The price is about $\frac{1}{3}$ rd of that in Sweden.

Russia proper has hardly any large waterfalls. Industries, wanting such power, considered to cost only $\frac{1}{4}$ th of steampower, must consequently be placed in Finland.

I am sure they will soon cost several times more than at present.

I read about your experiments with liquid air in a newspaper. Liquid air cannot yet be had in Finland.

I know also German tolerably.

I am,

Esteemed New Professor,

Your sincere, faithful servant,

G. Järnefelt
Nobleman. Landagent.

of horse power for water the price is about \$12
of that in London but I am not sure
Pinner paper has hardly any large waterfalls
laboratory, contrary to such papers, considered to
cut only 1/4 of what a paper of equal weight
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