Mr. Grocock,—

Yes.

Mr. Clarke,—

But that would not be much good here when scrap costs us about $1.00 a ton more than pig iron.

Mr. Grocock,—

That is in places where you can get lots of scrap.

This process reduces the amount of slag which ordinarily comes from the cupola, this is due to more perfect combustion. I can only compare it to the imperfect combustion of an ordinary oil lamp, which, through its imperfect combustion deposits a black residue on the glass, if the combustion is perfect there is no residue. This cupola will convert rust, *i.e.*, oxide of iron into metal without any slag resulting from it. I have always had very little slag coming from the cupola when using steam in conjunction with the air.

Mr. Herring,—

There is one thing I would like to know. You mentioned in your paper that it was necessary to use more limestone for fluxing.

Mr. Grocock,—

You know in introducing hydrogen there is always a liability of the tuyeres getting covered over, and the introduction of more limestone obviates that.

Of course, in using this system we had to make trials, and mistakes were made in introducing too much or too little steam into the cupola, and by putting the limestone in we kept the tuyeres clean.

Mr. Herring,—

All you were doing then was to use more fluxing? Why was this?

Mr. Grocock,—

I think the excessive amount of hydrogen made this necessary.

Mr. Herring,—

What about using a cheaper quality of coke?