Chairman,—

I will now pass on to the order of business, "Reading of papers and discussion thereof."

We have with us to-night Mr. A. C. Pratt, who will read us a paper on Lubrication, and I have no doubt the paper will prove very interesting as we shall all be glad to hear the fine points of lubrication as we are all anxious to know how to cut down the cost of oil and I have no doubt that Mr. Pratt will be able to help some of us considerably before he gets through with his paper.

Mr. Pratt,—

I may say that there has been very little written on this subject. I am indebted to Mr. J. W. Peterson, of New York, for some of my statistics, the rest is from my personal experience.

LUBRICATION.

The lost power caused by friction (the resistance caused by the motion of a body when in contact with another body which does not partake of its motion) in steam and gas engines and other auxiliary power plant machinery, is from 3 to 24 per cent. As this loss goes on from one day's end to the other, and we have nothing to show for it but increased fuel bills, the selection and application of proper lubricating oils is one of the most important problems that an engineer has to deal with.

Lubrication is the application of a fluid oil between two rubbing surfaces which will tend to keep them apart. A film of oil flowing between the bearings fills up the irregular places, and keeps the surfaces apart and also carries off any heat generated which would otherwise be absorbed by the bearing surfaces. To accomplish these desirable results the lubricating medium should have certain essential qualities and be properly applied, which the writer will herein discuss in a brief manner and eliminate so far as is possible lengthy technical explanations.

There are an infinite number of different kinds of oils and lubricants on the market which are offered by the manufacturers for general power plant lubrication. These are mostly