Translator's notes

It should perhaps be explained that the extensive use of the term 'machine' is due to the fact that rotary-piston machines incorporate all manner of pumps, blowers, and compressors as well as steam engines and two and four-stroke rotary internal combustion engines.
It is important to differentiate between 'Rotary-piston machines' (ROPIMA), which is a term used for the whole family of machines, and 'Rotating-piston machine' (ROM) which describes a particular configuration; the other two types are Single (SIM) and Planetary-rotation (PLM) machines.
After careful consideration the term 'engaging' was adopted to describe the act of forming variable volume chambers between two or more components which rotate relative to each other. Indeed, this action is very similar in some designs to the meshing of two gears although the resemblance may not be quite so clear in other designs.
Finally it should be emphasised that the English edition to of this book contains various modifications and additions which take into account observations and results obtained during the continuing research. These alterations were included after consultation and at the request of the author.

1. Introduction

While reciprocating piston engines can be made in few different basic configurations, an almost infinite variety of rotary piston arrangements is feasible. Indeed, the possibilities are so unlimited that they have tended to hamper the realisation of rotary piston machines, through focusing attention on the search for new and better types of rotary piston units rather than on fundamentals such as adequate arrangements for sealing the working chambers.
Existing systems devised for the classification of rotary piston machines are not sufficiently comprehensive and often incorporate inconsistencies which make them generally unsatisfactory. However, the growing number of such machines urgently demands some system of classification so that inventors can readily place their designs and quickly determine whether a particular idea is really new or whether it is already known. In time, such a system can be of invaluable assistance to patent experts in placing an invention in its appropriate category. Finally, and significantly, it can ease the problem of communication between development engineers and between the inventor and the development engineers.
The following classification of rotating piston machines is the result of a very careful and comprehensive study. Every important proposal and invention is, as far as available data will allow, carefully evaluated. By analysing first of all the characteristics of any particular design it is possible to place it in its appropriate group, relative to already known inventions, and to assess its features accordingly. It is,