

## CHAPTER IX

### PART I

#### LANCASHIRE ENGINEERING

IN the district of which Manchester is the centre, extending into Yorkshire and embracing in a radius of 50 miles, the whole of Lancashire and part of Cheshire, there are more engineering works of the first rank, and of every variety, than are to be found in a similar area in any other part of the world. Yorkshire firms have been referred to in a previous chapter. The Lancashire works are classed as makers of machine tools, textile machinery, bleaching and finishing machines, boilers, stationary engines, steam turbines, pumps, dynamos, gas works plants, paper machinery, locomotive engines and constructional iron and steel work. The firms engaged in these branches are very numerous, and mostly well known. To refer to all of them in detail would be impossible in a work of this character, but a few of the more prominent and older firms, giving also the largest employment, may be taken as typical of the different branches of the mechanical engineering to which they belong. Some are referred to in more detail in other chapters, dealing with Electrical Engineering, Shipbuilding, and Marine Engine Work.

Unlike most of the districts in the United Kingdom in which metallurgical industries on a large scale are carried on, Lancashire is not primarily a producer of raw materials in the shape of crude iron or steel. The hematite furnaces and rolling-mills of the North-west Coast, which are dealt with in Chapter VIII, are of later date than the engineering