and a number of others especially since 1940, in various parts of the country. Since they have been described in Government publications of the present series and elsewhere, we need say here only that while they differ somewhat, in general their founding and purposes are philanthropic, they are sometimes affiliated with a university, and their current support comes almost wholly from the corporations (one-third of it) and Government (two-thirds) for which they do research jobs. They often use patents, assigned to the sponsoring corporation, and even secrecy. Yet they favor basic research, amounting to 33% of their inventive work. Their commercial motivation is in some cases so strong that proposals have been made to limit their tax

exemption.

[452] The Research Corporation, a quite special type, was founded by Prof. Frederick G. Cottrell with his patents for endowment, on electric precipitation, along with the sound idea that patents are a commercial institution which can produce important profits only when managed in an aggressive commercial (competitive or monopolistic) manner. It is necessary to keep working on one's important inventions, and patenting improvements, to retain one's lead over competitors, and one must also fight for rights, and keep an eye always open for profits, and closed to the feelings of a fellow professor with an invention, and a little closed to the welfare of science and people generally, when that would interfere with profits. So 112 institutions, mostly universities, turn over their patents to this corporation, 443 which held 456 American and 277 foreign patents in 1952, and 238 applications, and which distributes the net profits from them, usually 10-15% to the personal inventors, and splits the rest equally with the proffering institution; thus the universities received half a million dollars in 1960.444 In addition the corporation gives awards for past successes, and makes grants to individuals and universities to support promising researches and inventions, 288 of them about 1951.445 From these have sprung some notable triumphs in the past: Lawrence's cyclotron, the Van de Graaf-Trump accelerator, and Kendall's steps toward cortisone. Finally the corporation runs a factory of its own, with 1,000 employees.

[453] As for recommendations, the philanthropic basis of the foundations, and their meager support hitherto, except by payment for jobs done at others' behest, may make any recommendations ⁴⁴⁶ rather useless. But still one would think that further advantage might be drawn from the unique independence and plurality of the foundations, to support inventions and researches which no one else will, because their benefits are remote, or inure to the public rather than to firms or the Government, or because the proponent is an impractical person, or simply because his idea is too new and strange for anyone but an occasional scholar to see its merit. E.g., the sometime Inventors Foundation ⁴⁴⁷ gave courses for inventors, on patenting and commercialization, and help in working out their problems. The Research Foundation and others, too, have helped inventors, as we said. Our consideration of the freelance and amateur inventor in section 11 of the previous chapter indicates a strong call for helping them, but that we cannot hope for any big inventive contribution from them—minor inventions and a few seminal ideas rather than long and

costly working out.