

CHAPTER 3

MEASURING INVENTION AND THE DECLINE OF ITS PATENTING

[48] A remarkable and nowhere sufficiently appreciated decline has been going on for the past 78 years, if not longer, in the proportion of inventions that are patented. We have already seen in table 1 and its source how British patenting once expanded rapidly, albeit with a slackening rate of increase after 1766, and reached a maximum per capita rate in 1902-11.

[49] In America from 1880 to 1934 the number of patents granted only kept pace with population, as shown in chart 1. (We have here eliminated patents granted to foreign residents, which have risen to 17%.)³⁶ Since 1880 our annual grant to Americans has fallen to 40,154 in 1961, or 219 per million of population. In 1879-81 they averaged 12,726, or 254 per million, a per capita rate 16% higher. Surely per capita *inventing* has not fallen off since that remote and bucolic date, but must have much increased. In 1880 49% of American workers were farmers, compared with 4.8% in 1962.³⁷ There was then but one tiny invention laboratory in the Nation, and the electric and chemical ages had scarcely begun. The difference between America then and now is like the difference between South Dakota and Connecticut today, which we find accompanied by a 10-fold difference in per capita patenting, and therefore presumably in frequency of inventing. Yet patents per American capita have declined.

[50] But if we wish conclusively to prove and measure the decline of patenting relative to invention, we must seek measures of invention, to compare with the patent counts at hand (chart 1). An historiographic index of the progress in yearly quantity of inventing in America would be of wider interest, too. Because of its difficulties none has ever been offered for recent decades, based on anything but patents,³⁸ an obviously shrinking tape, and incapable of measuring its own significance, or on worse evidence, or on statistics based on some of the evidence which we shall work up with much more care, elaboration and historical extension.

[51] Hart has interestingly measured over the centuries inventive progress in particular fields,³⁹ such as speed of travel, distance of fighting, longest bridge spans, and speed of cutting tools, but without enough such parameters to compose a general index. Economists³⁸ have sought to measure general technological progress; but this is by no means the same as measuring American inventing. For progress, and productivity, depend on many other things—the use of old inventions, the importation of foreign ones, innovations other than inventions, blunders public and private, the supply of capital and land, the discovery or the exhaustion of resources, the education and quality of labor, the losses through unemployment, strikes, war and military out-