

the invention, the market's development, etc., in 43%. But the assigning patentees blame the nonworking on the personal factors in 19%, the impersonal in 81%; and the assignees report the proportions as 3 versus 97%. Again we see that the unorganized inventor not only makes the easier, smaller, poorer inventions, but commonly cannot put them over through personal incapacity.⁴⁰⁶

[409] Another means of comparing the assigning with the non-assigning patentees is afforded by Sanders' statistics on their respective educations.⁹⁷ He finds them much less schooled, with 12.3 grades completed on the average, versus 16 for those assigning patents. MacKinnon's⁴⁰⁷ 14 independent inventors showed only 3 college graduates, 7 who only completed high school, 11 were sons of skilled tradesmen, only one was professional himself; and on the concept mastery test of intelligence they scored 51 versus 118 for inventive research scientists. Their ages averaged 47. An A. D. Little survey³⁹⁴ that sought out 15 relatively successful amateur inventors, found their youngest to have 50 years, apparently a disappearing class. By Sanders' data the unassigning inventors averaged 46.3 years when receiving their patent, and the assigning ones 41.6 years:⁴⁰⁸ and the proportion over 54 years at time of application was 23% versus 9.5%.⁴⁰⁹

[410] Yet the independent, basement inventor and the small firm are fair-haired boys of politics; they can do no wrong, and must be encouraged, say the prints of the marketplace. Indeed, Van Deusen, writing in *Fortune*,²⁰⁴ says twice that the lone inventor should be defended by corporations, because if he is lost the patent system "may become defenseless against political attack." (What a confession of weakness in the system!) So he reviews some ways in which the freelance might be or has been encouraged, as by adult university classes in the new technologies, inventor-aiding foundations, and more receptive, trusting, and cooperative attitudes from the corporate side. Yet his own statistics are devastating as to the value of outsiders' ideas.

[411] In fine, how shall we estimate the value of unorganized invention? We have seen that its products are smaller, easier, civil not military, mechanical rather than electrical or chemical, or else mere duplicable starts for inventions, which organization must essentially create. We have seen that the patents of the unorganized are almost always scorned, and when worked are produced on a smaller scale, a gadget perhaps. We must also consider Research in the appropriate sciences, and Development of even the smallest details (naturally carried through in connection with production); for all of these have been added in along with invention in the narrower sense, in our foregoing sections on invention's support by industry, governments, universities, trade associations, etc. With the university work already counted among the organized, and with little means by patents or any other institution whereby the unorganized inventor can be repaid for scientific research or for development, and with these two labors much more important in the organized sphere than invention in the narrowest, legally and economically patentable sense (cf. our ch. 6: Patents Do Not Apply to Most of Inventions), the following hypothesis seems to this writer reasonable: That considering ultimate values for invention produced, by all those kinds of research proper and development, there stands alongside each patent assigned to an American