

100. Writing for the L.A. patent attorneys, he objects to Melman's (N 65) use of counts of engineers and scientists to measure invention. But not successfully, since his only statistical evidence is their record of 72% of invention originating with engineers and scientists. R. F. Carr: *Our Patent System Works*, a reply to the Melman report, *PTCJRE* 4:55-76, 1960, pp. 64, 5; or in *JPOS* 42:295-326. Cf. ftN 220.

102. The rates of growth, usually doubling or faster in each decade, of a large number of inventions of the generation before 1930 are supplied by Ogburn: *Influence of Invention*, assisted by Gilfillan, N 45.

103. Kreps, T. J., statement on inv. to the TNEC, *Hearings*, Pt. 30, Technology and Concentration of Econ. Power, 16209-69, Apr. 8, 1940, p. 16212 etc. Also Brozen, N 60 and ¶ 390.

107. Sarell, M.: *Variations in the Growth of Mod. Research*. Well compares statistically, with some explanations, the growth of Physics discoveries in U.S., Brit., France, and Ger., by quinquennia, from 1801 to 1900-25. Mim. paper bef. Amer. Sociol. Assn., 1960. J. Hopkins Univ.

108. On a steam-boiler, Apr. 21, 1830.

109. Data of 1959 from publication of Nat. Assn. of Suggestion Systems, 25 E. Jackson, Chgo. 4. Cf. also Z. C. Dickinson: *Compensating Indus. Effort*, 1937, chaps. 18 and 19 on individualist and collectivist sug. systems.

110. Rossman, Jos.: *Stimulating Employees to Invent*; *Ind. & Engg. Chem.* 27:1380-6, 1510-15; 1935. "Very few (pats.) have resulted from this means," p. 1510. The only proportion he cites is not more than five pats. out of 4,000 suggestions to GE.

111. *N.Y. Times*, Feb. 20, 1955, sec. III, p. 1, cited by Schmookler, ftN 99.

112. Wilson, Robt. E.: *Looking toward the Future of Inv.*; *Centennial Celebration of the Amer. Pat. Sys., 1836-1936*, *Proc.* pp. 20-7; pp. 21,2 used here, rev'd in Schmookler: *Pat. App. Stat.*, N 38. Cf. also our ¶ 81.

119. Our N 214, his p. 95. All large company patent holdings are available in Study No. 3, N 138.

120. Brown, B K.: *The Amer. Pat. Sys. Aids Chem. Indus.*; *Ind. & Engg. Chem.*, Indus. ed., 31:580-4, 1939, p. 583.

121. Andrews, D. D., & Newman, S. M.: *Activities and Objectives of the Office of R&D in the U.S. Pat. Office*; *JPOS* 40:79-85, 1958, with bib. Followed by Lanham, B. E. & Leibowitz, J.; *Classification, Searching & Mechanization in the U.S. Pat. Office*, in *do.* 86-109. And see Pat. Office rept. for 1959, *JPOS* 42:152-6. Also *Pats., Tr-mks & Copyrights*, Sen. Rept. No. 72 of the Senate Subcom'ee on Pats., etc., Feb. 18, 1957. And N 204.

122. *Science Doctorates*, N 73; and Blank & Stigler, N 77, p. 78.

123. Quoted by Frost (N 221, his p. 54 n. 223), from *McClain vs. Ortmyer*, 141 U.S. 419, 426 (1891).

124. Machlup, N 177 p. 63.

125. Machlup, F.: *Pats. and Inventive Effort*; *Sci.* 133:II:1463-6, 1961. Stat. comparisons of the two. Replies Sept. 8, pp. 637ff.

126. Spencer, Richard, narrated and deplored the decline of patenting, thinking of it as our only means to secure invs. *Let's Encourage Our Inventors*; *Harv. Bus. Rev.*, May-June 1956, adapted in *Read. Dig.*, November 1956, pp. 205,6,8,9. *The Crisis and Inv.*, adapted from *Sat. Eve. Post* in *JPOS* 39:699-719, 1957.

127. Bachmann, O. J., Scherer, F. M. *et al*: *Pats. and the Corp.*, a Rept. of Indus. Tech. under Changing Pub. Policy; 2d ed. 1959, 195 pp., p. 138; see N 461.

128. Celler, Emanuel, Chmn., House Judiciary Com'ee, in *Pats. and Monopoly*, *JPOS* 38:49, their note 32, 1956.

129. *Sci. & Engg. in Am. Indus.*, N 85, p. 83, based on repts. from 93% of the industries named and 53% of all industries.

130. ¶ 431. Cf. also graph 3 in stabilized money, covering all R&D except that by universities, etc.

132. Sanders, B. S.: *The Pat. Utilization Study*. With assistance of Jos. Rossman; *PTCJRE* 1: 74-111, esp. 93, 1957. Although a preliminary study, data are very solidly established on the utilization of invs., assigned and not, pat. by Amer. inventors, for 3 dispersed recent years, with considerable further data on the same, supplemented by mim. data of June 1957, and Sanders, N 166.

134. Jewett, F. B.: *Are Pats. Suppressed?*; in *N.Y. Jol. of Commerce: The Pub. Interest in a Sound Pat. Sys.*, a symposium, 52 pp., 1943, p. 31,2.

135. Vaughan, F. L.: *Economics of our Pat. Sys.*, 1925, 303 pp.

136. Kaempfert, W.: *Our Defective Pat. Sys.*; *Outlook* 101:548-51, 1912; and *Systematic Inv.*, *Forum* 70:2010-18; and *Inv. by Wholesale*, 2116-22, 1923.