

of policy and procedure—best known ways subject to evolution as better known ways are discovered—revealed by the investigations and experiments; and (3) a system of planning and control of operations in terms of standards as established. Inasmuch as the textile industry generally was facing a decline and this newly acquired business in particular was insolvent, there were present in the situation the necessity and opportunity to apply scientific management principles all along the line—in determination of policies as well as in merchandising, finance and production. The logical points at which to apply the new managerial point of view, were; first, in determination of policy as to markets, products, and extension of the business; second, policy and methods of merchandising, production and finance; and third, policy and methods of relations with workers.

II. Determination of Policy

6. Investigation of the history and status of the textile industry disclosed that it had come to be a most disjointed and wasteful industry. Cotton manufacturing had got its start in New England about the beginning of the nineteenth century. In that day in a frontier environment a man of pioneering instincts would acquire a mill site on some stream, build a dam and small cotton mill, build a home on the hill beside it, and manufacture gray, or unbleached cloth, and himself sell it, by auction or in other ways. The cloth's identity with a particular manufacturer disappeared when it left the mill. He prospered because for many years the rapid growth, prosperity and increasing purchasing power of the country, and the increasing use of cloth, kept demand ahead of production. These early owners became prosperous, and for social reasons moved to cities and left the management of their mills to agents. They then ceased to be manufacturers. This situation gave opportunity for men who saw business in marketing the products of a number of mills, and the commission houses came into existence. The mill owners who had ceased to be manufacturers now ceased to be merchants. The commission houses came to enjoy great prosperity because of growing business, easy profits and moderate investment risks, and became factors, really the bankers, for the mills, loaning them capital secured by liens on accounts and stock. The mill owners thereupon

ceased to be financiers. During this period there developed also a group of middlemen, who, not able or desiring to act as commission merchants or to render financial assistance to the mills, acquired the service of bringing seller and buyer together for a small commission; these were cotton goods brokers. Thus there came about a situation in the industry in which a number of specialists handled the products on their way from mill to consumer, each exacting his fee to cover his costs and net a profit. The habit of the industry was very likely compelled at the beginning by frontier conditions—the wide dispersion of consumer markets and the difficulties of transportation—but this habit, representing a highly disjointed and wasteful series of processes, became so firmly established by tradition that it continued to exist long after density of population and perfection of transportation had eliminated the environmental factors which were economic justification for its origin.

7. This analysis of the origin, condition and facilities of the industry led to the establishment of certain definite policies by the new owner and manager of the small shoddy mill which had been acquired by accident, and which was the nucleus of that business which some twenty years later was to acquire the new corporate name of Kendall Mills Inc. This policy comprised:

a. Elimination of items of the old business which had not been profitable and for which there appeared to be no prospect of profitable markets; and concentration on one section of one division of cotton goods—the gauze and cheese cloth section of the print cloth division of the industry.

b. Constant study of the market and of possible uses of converted gray goods for the purpose of discovering and creating new uses and new demands for the products.

c. Integration of the series of processes which had become so disjointed in the industry generally, and consolidation under one general management of all processes from purchase of baled cotton—as nearly as possible directly from the planter—to marketing—as nearly as possible directly to the consumer—of packaged items carrying a trade-marked name and forever identified with the particular manufacturer and a particular high quality of service.

d. Constant study of new methods with respect to all the processes of fabrication and of distribu-

tion, for the purpose of eliminating those numerous wastes and costs which are present in an industry so disjointed in its organization as this had come to be.

e. Establishment of economically balanced functional units in the total series of processes, each of which would perform its function with precision in the best known way; and the establishment of a control of a flow of work from one unit to another—which in time came to be also from one factory to another—which would effect continuous processing, continuous employment, continuous utilization of equipment of highest technical quality, the shortest possible turnover, and minimum investment of capital in equipment and in materials.

f. Establishment, as the growth of the business would warrant, of specialized units with single purpose equipment, an element of policy which was facilitated by the limitation of the products to one class of cloths—print cloths—and by the fact that the various items within that class utilize uniform counts of thread and vary as to weave within the range of 20 x 12 to 48 x 44 threads per inch on widths which can be economically woven on forty inch looms.

g. Extension of the properties, as development of the business would warrant, by the purchase, as they might be for sale because of financial embarrassment, of existing mills located in South Atlantic states and having buildings of reasonably modern type which could be easily enlarged and adapted, situated in the country outside cities and towns, with ample land, and equipped with machinery reasonably good and fairly well arranged. Inasmuch as southern mills located in the country have to provide housing for their people, the properties acquired should have lands of such extent and nature as to permit the economical development of model factory villages.

h. The retention of the original New England plant as the finishing and marketing plant, to be supplemented if necessary by additional finishing plants in the same regions; the utilization of southern plants for the manufacture of unbleached cloth for these northern finishing plants; and the acquisition of these southern mills only fast enough to supply seventy-five to eighty-five per cent. of the gray cloth ordinarily required by the finishing and the marketing units of the organization. The addi-

tional fifteen to twenty-five per cent requirement of gray goods could be bought in the open market, which would permit the maintenance of continuity of processing and of employment in the cotton mills organized to take care of the base load instead of peak load requirements.

i. With respect to industrial relations, the establishment of wholesome and pleasant mill villages; with comfortable homes, churches, schools and places of amusement; landscaped and improved streets; citizenship and community self government; and the development generally of a collective spirit of good will which should embrace ownership, management and workers without distinction.

III. Organization

8. The organization of Kendall Mills Inc. is completely functional; i.e., according to the technical requirements of the business, functional responsibilities are clearly delineated and defined, and the various executives have complete responsibility and therefore adequate authority within their respective fields of responsibility. Any individual in the organization may communicate directly with any other individual on matters pertaining to his responsibility without the necessity of the communication passing through an intermediary "authority." So highly regarded is individual initiative and responsibility under clearly defined functional organization, that one reason the owner and manager maintains an office in Boston, separate from the general offices of the business, is to avoid the danger of his being constantly consulted by executives on details of their managerial responsibilities. The other reason is to assure himself freedom for assumption of his own responsibility the nature of which is indicated below.

9. Because of the natural grouping of functions as well as because of the geographical distribution of properties, the organization of Kendall Mills Inc. consists of four principal parts:

a. The general administrative functions, carried on at the Boston office of the president and certain assistants.

b. The general business functions—general purchasing other than of raw cotton, merchandising, selling and advertising, general and cost accounting, credits and collections, traffic, statistics, the preparation of schedules, and so on—located at the main outlet plant. These general business offices