

THE ORGANIZATION AND MANAGEMENT OF A MEDIUM-SIZED PLANT<sup>1</sup>

THE CORONA TYPEWRITER COMPANY, INC.

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## I. NATURE OF THE PRODUCT

THE Corona Typewriter Company, manufactures only a portable typewriter, the case in which it is carried, and a few accessories such as folding stands and label holders. Furthermore, as only one model is manufactured, this paper deals with a specific type of manufacture; the continuous producing of Coronas and their cases. Our system of organization and methods of manufacturing control would probably be only slightly applicable in plants, where there are a great variety of products manufactured.

Our problem is to produce finished Coronas of the highest quality in large quantities in the most economical way, and in order to do this we have found it expedient to highly departmentalize and thoroughly functionalize the entire organization. Going further, we have taken individual departments and have studied and standardized every operation performed in the department. Standardization has necessarily had to be thorough and far reaching.

We divide our manufacturing into two parts: First, we manufacture parts to finished parts stock, and, second, we assemble machines from this stock. Our parts manufacturing departments are composed of various machine departments, various finishing departments and a bench assembly department where parts are adjusted before being stocked, springs are made and other operations performed which cannot be readily assigned to other departments. In addition to these departments we classify under parts manufacturing all inspection work performed on parts, as well as the tool room and wood shop.

Owing to the nature of our manufacturing problem we have been able so to route the flow of parts that it is with few exceptions continuous from the first to the fourth floor of our Groton plant, from there to our Cortland plant and back to the fourth floor of our Gro-

ton plant. There is a comparatively small amount of back flow of parts from a higher to a lower floor, though occasionally this is brought about because it would be unwise to place certain special machines in the department where they would not be utilized continuously, when another department is equipped and has the capacity for performing the work. In an enterprise like ours back flow is not so important a factor, however, as in a factory manufacturing large, heavy products, as a pan containing thousands of typewriter parts may weigh only a few pounds.

## II. GENERAL ORGANIZATION

The entire organization from president down has been highly functionalized and the result has been increased individual and group efficiency (Fig. 1). In this connection the following explanation of the functionalizing of factory departments may prove of interest:

1. The factory has to be properly heated, equipped with line shafts and pulleys, motors, power, etc. It must be properly inspected, watchmen provided, millwrights and electricians must be available, cleanliness maintained and adequate safeguards provided against accident to employees. The responsibility for this work is placed on the works engineer.
2. We must next provide the machinery and tools to perform manufacturing operations. These details are under the supervision of the production equipment engineer.
3. The material must be available in order to manufacture parts. It is secured by the purchasing department.
4. We must provide the men and women to operate the machines. This is a function of the employment department.
5. Now, being ready for production we must utilize a planning and control division, which studies operators, sets rates, determines methods of manufacturing, establishes adequate control of stores, and a system of scheduling, routing, dispatching and time keeping on all operations. These are major functions of the planning engineer and his division heads.
6. Next we must provide skilled supervisors for each department and such supervisors must not only be thoroughly familiar with all manufacturing operations under their control but must also be competent instructors on all operations and close observers of quality. Each supervisor reports directly to the works manager, though his functions are dictated largely by the planning department.
7. Though we place primary responsibility for quality with the supervisor and secondary responsibility on the operator, we provide for both walking and detail inspection of parts as well

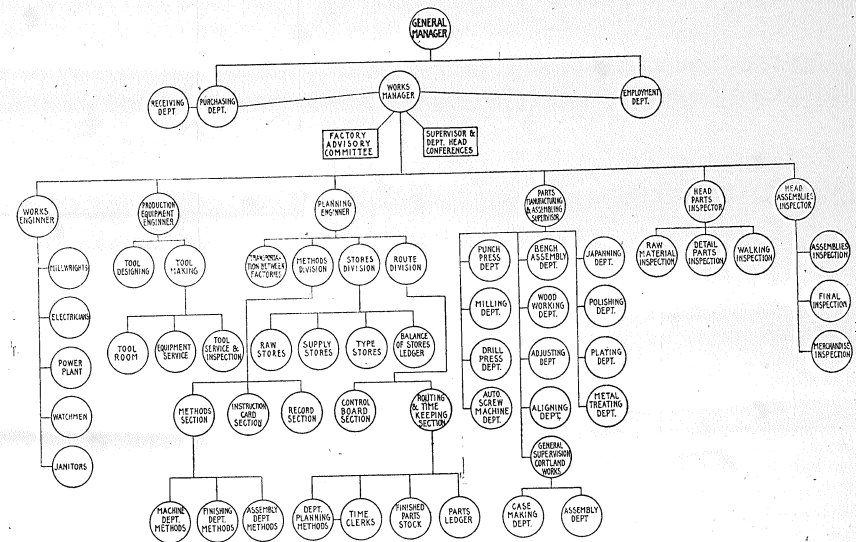


Fig. 1. Manufacturing Organization Chart.

as inspection of raw materials. We, therefore, have a head parts inspector.

8. Because of the great difference between parts inspection and assemblies inspection we have found it advisable to have a head assemblies inspector who is responsible for all assembling operations and the quality of the finished product. He also handles the inspection of such merchandise as we handle, for example, special luggage of all kinds made for the Corona.

The works manager has as his consultants on factory matters two groups: The first is known as the factory advisory committee which consists of all heads of departments described above, except supervisors, together with the head of the service department, and the head of the experimental and designing department, both of which are under the general manager and only indirectly connected with the factory organization. The head of the methods division of the planning department is also a member of the committee. The committee considers and passes on all major factory problems and meets semi-monthly and at any time on call of the works manager. At times there will be one meeting every two weeks and at other times there may be three or four.

The other advisory body is composed of all supervisors, and all members of the factory advisory committee. These conferences are bi-monthly and are open forums for the discussion of any topics of general interest. They also enable the management to present information on sales, costs, items of expense, publicity methods and other matters which ordinarily are not brought to the attention of foremen, but which are of vital interest to them and tend to stimulate enthusiasm and inspire confidence. Our supervisors conferences are addressed periodically by the president, general manager, sales manager and other officials of the company and, like the conferences which are purely for consideration of factory problems, these are always open forums for general discussion after the informal talk.

## III. DETERMINATION OF SALES, PRODUCTION AND FINANCIAL SCHEDULES

The world is our market and every individual old enough to read and write is a possible prospect. We therefore have a research division of our sales organization, which maintains records of all sales made within

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