44-8673-5m-12 21

**Manufacturing Order No.**

Corona Typewriter Company, Inc.

Starting Date

To Supervisor Dept. No.

Make—Quantity

Part No.

Part Name

Finishing Date

Material Required Lbs.

Specifications

Stock on Hand S. L. Clerk

Remarks

PARTS ORIGINATED

| DATE | QUANTITY | DATE | QUANTITY |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Supervisor

When complete quantity of parts are originated return this card to Route Division

Fig. 11. Manufacturing Order.

facturing order is then sent to the balance of stores ledger clerk who apportions the material on the balance of stores card and then sends the order to the control board division for use in planning on the control boards. If for any reason the balance of stores clerk does not have the material required, the order is returned to the parts ledger clerk where it is filed under "Orders Held up for Material," and the balance of stores clerk immediately takes the matter up with the purchasing department in order to hasten delivery of material.

*Control Board.* The control board clerk upon receiving the manufacturing order immediately checks up all tools and machines required for the manufacture of the order to prevent hold-ups, or in other words, he does the same as a train dispatcher—sees that his tracks are clear for the coming train. After he has satisfied himself that tools and machines are available for the routing of work on the control boards, he takes the machine burden record and proceeds to lay out his work on the control boards so that it will be completed on the finishing date specified on the manufacturing order.

Each control board consists of a number of grooves, every groove representing a part. When necessary several grooves are used for the one part. At the top of the board is a calendar of all working days, each day represented by an index strip 1 4/5 in. long for each day from Monday to Friday inclusive, and 1 in. long for Saturdays. The reason for this is that 1/5 of an inch represents one hour and we work nine hours each day from Monday to Friday inclusive, and five hours on Saturday. Long white cardboard strips 3/4 in. high are printed with markings every 1/5 of an inch, each mark representing an hour and every fifth mark is a heavy line for quick reference. If the first operation taken from the routine card for the given order of parts should take twelve hours, one of these strips is cut 2-2/5 in. long, and the following information is placed thereon: Part Number, order number, operation number, machine number, quantity and department number. This slip is then placed on the board in the groove representing the part and under the date which the machine burden record shows that the machine will be available. While it is true that we plan to a certain machine, the supervisor of a department may do the work on any machine in the group, but he must complete the work in the specified time. The control board clerk proceeds in the same manner with all operations on the order until all have been posted.

*Planned Operation Lists.* The dispatch clerk copies all work shown on the control board on what is known as the planned operations lists (Fig. 12). This list is sent to the department supervisor six days in advance of the time that an operation is to be started to show him just what work he will have to do in his department. These planned operation lists are made out in triplicate, one copy being sent to the supervisor of the department, one to the planning center serving that department, and one being filed for reference of the dispatch clerk. The planned operation lists give the part number, operation number and name, quantity, order



351-6839-5000-B20

**PLANNED OPERATION LIST**

Corona Typewriter Company, Inc.

FOLLOWING PARTS ARE PLANNED TO START TO-DAY

Dept. No. ..... Date .....

| Part No. | Operation No. and Name, Quantity, Order No and Machine No. or Group | Tool Req. No. | Tools O.K. | Stock Req. | Oper. Ticket O.K. | Date Started Super. | Date to be Finished | Date Finished Super. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | Checked By _____ | | | | | | | |
| | Routing: Route Dept. | | | | | | | |

Fig. 12. Planned Operation List.

**COST OPERATION TICKET-DIRECT LABOR**

CORONA TYPEWRITER COMPANY, INC.

DEPT. NO. | MFG. ORDER NO. | WEEK ENDING DATE

PART NO. | EMPLOYEE NO. | NAME OF EMPLOYEE | PLANNED FOR MACH. NO.

OPER. NO. | OPERATION NAME | REASON FOR D.W. OR EXTREME EFFIC.

O. K. SUP'R | O. K. INSP'R | CHKD P. C. C. | LOT QUANTITY | PIECES RETURNED | PIECES REJECTED | PIECES PAID FOR | P. W. / D. W.

TIME | FINISHED / UNFINISHED

BEG. FIN. BEG. FIN. BEG. FIN. BEG. FIN. BEG. FIN. BEG. FIN. BEG. FIN. BEG. FIN. BEG. FIN. BEG. FIN.

LABOR RATE | EFFICIENCY | TIME PER 100 PC'S

LABOR AM'T | MACH. NO.

Routing: To Cost Dept. 9-0655-50m-9-22

Fig. 13. Operation Cost Ticket.

number, machine number, or group, date to be started and date to be finished. The dispatch clerk also makes out all operation cost tickets (Fig. 13) covering planned work shown on the planned operation lists, and sends them with the planning center copy of the planned operation lists to the proper planning center clerk. He also sends the bills of materials (Fig. 14) for all materials to the raw material stores. The reason for sending the planning center clerk a copy of the planned operation list is to inform him of the work to be done in the department which he serves so that he may be ready to deliver it to the proper machine at the time specified. The supervisor of the department checks the planned operation lists as he completes the work, and upon completion of all work shown on any one planned operation list he returns the list to the dispatch clerk in the control board division where it is checked with the control boards to catch any error due to posting the control board or to the supervisor incorrectly checking his list.

*Operation Cost Tickets.* Operation cost tickets are made out in duplicate and are used to record time and other data for pay roll and costing purposes. Upon completion of an operation, all operation cost tickets are