

Figure 3

trol Board Clerk must have very good explanations for such abnormal conditions and see that they do not occur very frequently.

Figure 4 shows a chart giving the cumulative monthly production of all assembly jobs for the month of February, together with orders and shipments. This is merely a sample chart and does not show our actual production during February. It is drawn up to give an idea as to how a chart would look where perfect balance on all assembly jobs is not maintained. The left-hand margin gives the cumulative production which should be attained on the date indicated on the right hand margin. At the bottom are shown the different job numbers, together with the domestic, foreign and total orders, and domestic, foreign and total shipments. I have such a board in my office where the information is posted daily and whereby I am able to follow closely all assembly attainments. I can see at a glance unbal-

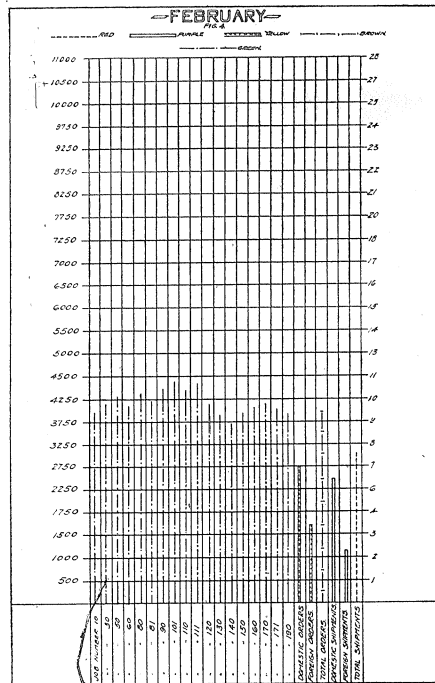


Figure 4

anced conditions and can take the necessary steps to remedy them. Next to this board is one showing cushions, which I describe under Fig. 5. These two boards give very close control on all assemblies. The question may be asked as to why domestic and foreign orders and shipments are shown while machines are not carried through assemblies as domestic and foreign machines. The reason is simply that I wish to know how the proportion is running, although the proportion has no direct connection with the control of assembly jobs. (The relation of domestic to foreign machines in process of assembly is controlled in another manner by the Planning Department.) Where a board of this kind is used, as for example, by the Planning Engineer, only total orders and shipments are shown.

Figure 5 is a chart which is posted daily to show the cushions of machines ahead of each assembly operation. For reasons which will be explained, it is section-

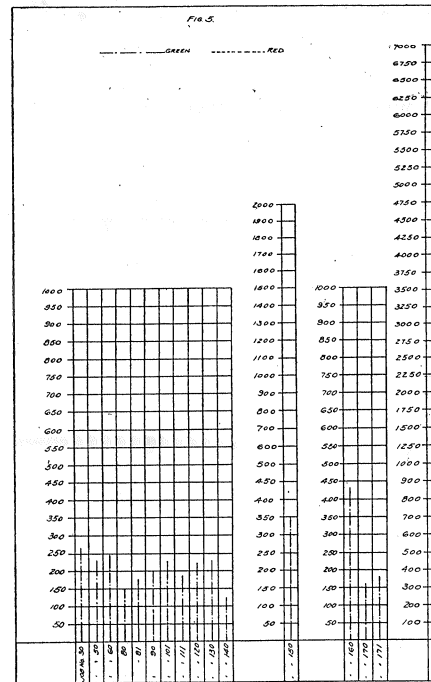


Figure 5

aized. The left section is used for posting quantities of assembled machines ahead of each job at our Cortland Plant. The single section next to it shows the quantity ahead of the next assembly, an operation known as "adjusting" (No. 150), which is performed at our Groton Plant. A very large cushion must be carried ahead of Job No. 150 because of transportation. For example, of the 350 machines shown, only 50 might be at the Groton plant; 250 might be in transit and 50 might be in Cortland awaiting shipment. The machines at this stage have to be transported by auto truck a distance of eleven miles. The third sections show the remaining assembling operations at the Groton plant where the cushions are the same as at the Cortland plant. The fourth section shows machines ahead of shipping or in stock, and is separately shown because on a chart of 1000, stock might run off the board. As I use the chart, I have a blue tape across

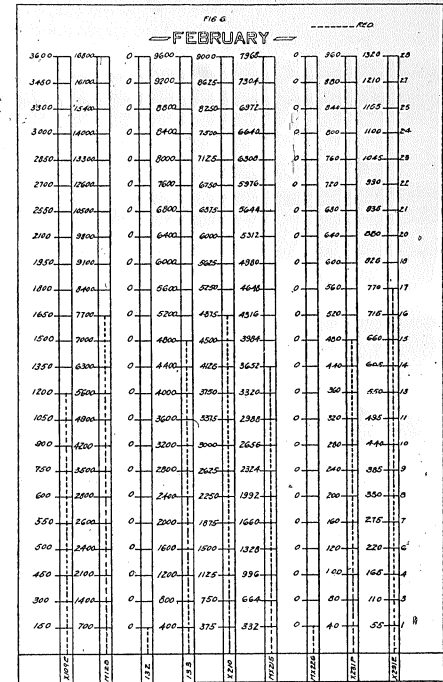


Figure 6

each of the sections to indicate what I consider a normal cushion and to show unbalance. This chart, in connection with that shown in Figure 4, gives very satisfactory information on assembling conditions.

Figure 6 is a chart in the experimental stage, but the experiments so far have been very interesting. It is a monthly production chart and might possibly be used to good advantage as a production control board in a small manufacturing plant. The chart is made up with a pre-determined production requirement for each part indicated for the coming month. It is posted daily and is cumulative. In estimating the quantities, allowances are made for part cushions and lot sizes necessary for normal production. This is done by allowing one department to produce parts a little faster than another department in order that larger quantities may be sent to the next department performing the work. It is frequently the case that one department might work