

THE DRAUGHTING ROOM.

Mr. Frank G. Woollard in "Some Notes on Drawing Office Organization" in the Journal and Transactions of the Society of Engineers, deals in an interesting manner with the personnel of the drawing office. He says:—First of all, it is necessary to have men who are intelligent, progressive in thought, and facile in expression. A knowledge or experience outside their actual work is desirable, tending, as it does to broaden the outlook. Most necessary, indeed, is an outside interest which will detract from the high-pressure work of the day. The men who fill our drawing offices to-day are young—mostly too young. The drawing office is merely an incident, as a rule, in the training for a specialized post. This is to be regretted (when viewed from the point of drawing office organization). It means that the older draughtsmen are frequently regarded as failed candidates for better positions, inasmuch as they are put into competition with an increasing number of men, fresh from technical colleges, who are in a position to accept a pittance in order to obtain a start in their profession. All this is in the natural order of the reversion from the old apprenticeship system to the college-trained engineer. It is necessarily difficult to ensure smooth and even results when drawing offices are peopled with an ephemeral staff. To combat this tendency to rapid change it seems necessary to offer a wage inducement rather above the average at present paid to draughtsmen. This is, judging by the mechanical engineering trades standard, somewhat under the rate set for a mechanic. The wage inducement that could be offered would not, of course, restrain the man who was to make a mark in his profession, but would simply tend to steady the market in good draughtsmen. What the actual wages should be must be left to the individual employer to settle, the author preferring to leave the further discussion of this point to the economist.

It is in connection with this floating population in the drawing office that properly organized routine proves its value. All new comers are obliged to toe the line in conformity with the regulations of the office, and, as previously explained, information cannot be omitted without the checker being aware of it. A phenomenon noticed by all who deal in systems is that system, although just, is absolutely ruthless where a waster is concerned.

The next factor to consider is the hours that the staff should spend at work. There are a great number of factories, the managers of which are of opinion that draughtsmen, being a link between the factory and the office, should work factory hours. This, on the face of it, is apparently just. It is certainly a matter of expediency, since it is frequently troublesome to have a department, to whom all have to turn for information, out of office when the factory is at work. To have need to resort to the drawing office at all hours of the day or night (for overtime has to be considered) simply argues insufficient staff or mis-management. It should be remembered also that although a draughtsman's work is not physically arduous, it involves an attitude of mind continually on the alert, receptive of new ideas, and quick in embodying them; hence work at high pressure over 7 to 7½ hours per diem, with the necessary occasional spells of overtime, is sufficient if the desirable high standard of excellence is to be maintained. In the author's personal experience the greatest number of mistakes met with have been with staffs working full factory time, viz., 54 hours per week.

The question of temperament is probably the hardest to deal with. In order to obtain that smooth running conducive to the best work not a little attention must be paid to the

psychological aspect of organization. It may be taken for granted that the office is well ventilated, of equable temperature, and as comfortable as can be reasonably expected; for the company that houses its staff badly, and expects the best result in the matter of work is in the same class as the man who permits his machinery to rust in the open, and is surprised to find that its efficiency is impaired. Such a firm is an anachronism in these days, probably existing only because of its own inertia, and likely to be relegated to limbo with all other antiquated stock in the course of a generation or two.

Given, then, that there is no physical cause for dissatisfaction, that remuneration is reasonable, there still will be (it is humanly impossible to avoid it) times when one or another will become discontented. To obviate discord it is necessary, whilst dealing firmly with any breach or misdemeanour, to discover why and how the grievance had originated, and if possible to remedy any defect in the system that may be brought to notice. There is one almost infallible method of preventing dissatisfaction, and that is to give all the staff some real interest in the work that they are carrying out.

This happy result is probably best secured by discussing the work with the individual preparing the drawings, by pointing out the advantages of the line of thought pursued throughout the work, as opposed to other perhaps more obvious methods. By showing how costs can be kept down, by the exercise of thought, how certain adaptations may render machining unnecessary, a hundred and one other points of interest will occur readily enough to anyone in charge of design work.

The great object served by all this is the avoidance of secretiveness. Secrecy is usually unnecessary, and should not be encouraged. It leads to the construction of those watertight compartments to which reference has been made. It is quite impossible, for instance, for anyone to take an intelligent interest in cheapening production if, on application to the piece-work or estimating departments for a comparison of prices or times, he is told to mind his own business. This does occur, and often, and although perhaps it is a small grievance, it is a very real one; the man thus rebuked probably retires to his drawing-board in a huff, and does not trouble about costs at all in the future. It is not, of course, suggested that such information should be given in bulk, or to irresponsible persons, but when one is endeavoring to mould the mind of the workshop one must not refuse to supply data. It may be as well to remember that under modern conditions such data is really of little value in the employment market, and that trade secrets are scarcely existent to-day.

Unfortunately, it is necessary occasionally to reprimand an individual. This is a matter that should be between chief and subordinate alone. Slight as the reproof may be, it should be administered privately; to reprimand a senior in the presence, or to the knowledge, of a junior is simply inviting insubordination. Occasionally it is necessary, as a salutary measure, to make public comment on some action, but this power, if seldom used, has a most healthy deterrent effect when it is put into force. Beyond all things it is good to put away all remembrance of these unpleasant incidents. It is not accounted for as forgetfulness, although it may be regarded as a sign of clemency; in any case it puts the delinquent on his honor not to repeat the offence.

A few words on the state of the trade, in a general sense, the race with competitors, and the likely trend of