

gested attempts. The ideal filing system is one in which, with the least amount of effort, one can put his hand immediately and accurately on the thing itself, be it a book, a pamphlet, or a data sheet.

Second, he may keep a special card index of important data and reference to valuable articles. This at once involves labor and attention which few busy men can give and which, if done by assistants or librarians, largely loses its personal value to the one who needs it. The same objection as to the discouraging effect of intervening indexes holds good here, too, and it is further safe to say that of all the contrivances for indexing the most difficult to handle readily and examine rapidly is the card index system.

Third, he may abstract important data in a limited way on loose leaf transparent paper, standard letter-size, and he may remove or detach articles of special value from out his journals, to be filed in regular office file system, like correspondence.

The writer has tried all of the above methods at considerable cost in time and patience, and has, for many years, settled upon the third method. With all its admitted limitations it seems to be the best for an office which is expected to find out information on a great variety of subjects in a limited time, and with the least amount of effort.

Some description of its practical workings may be of interest:

All the technical papers of the office pass on to the desk of the head of the office and are at least looked over (not read) by him. Articles important to his particular specialty are checked with pencil, and articles of especial interest are looked over with care and double checked. Once in a long while data important enough to go to the data file are noted. This is either especially abstracted by the stenographer, or, if a diagram or cost data, perhaps traced in the drafting room, all on transparent paper for copying purposes. Special data of this kind, on $8\frac{1}{2} \times 11$ -in. sheets, are filed in the office data file (a separate but common standard correspondence file). From the data file loose-leaf working note-books are made up from blueprints for office or travel purposes. They are altered, re-filled, amended and sorted back from time to time as needed to keep them of usable volume and usefully up-to-date.

The technical journals, with checked articles, go to the office clerk or the stenographer at odd hours, or the librarian if one can be afforded, and the useful articles are removed by tearing them out with a ruler. They are folded, usually once, to standard size, with one edge lap left for binding, and are then filed in a subject index file, like current correspondence. The Dewey Decimal system, especially arranged for the office, is used, but only as a general subject plan. When the file is full, portions of its contents, especially that which is most useful, are simply bound in plain pasteboard covers and placed in the library shelves, with titles. Such a book (or many books) would contain all the recent articles thought to be of special value on a given single subject. The remaining portions of the technical paper are thrown away, but in a large office, warranting the expense, duplicate bound copies can be kept as well, with the general published index as their key.

The objections to this system are as follows:

First, it is too expensive for any but the most important offices doing specialized work. Second, data accumulate almost too fast unless rigidly kept down to a minimum. Third, it requires some personal attention of

the head of the office, a competent assistant, or the employment of a regular librarian.

The advantages are:

First, it compels the office head to know all the time what is being published in current engineering literature, if only by inspection. Second, it removes all intervening indexes between the searcher and the final repository in bound volume. Third, it keeps one's library usefully up-to-date on all lines in which one should be especially interested. Fourth, it is economical of final shelf room and cost.

Obviously, one should not start so elaborate a system as this unless he is fairly sure of the special line of engineering to which his life will be devoted. Otherwise, waste effort and discouragement will be certain. It is not to be recommended to the young man, but only to the mature man of early middle life when his work clearly indicates the necessity for it. It is, however, the prime requisite of the engineering specialist. To him some such a system is invaluable. Not a few consulting engineers use this standardized system interchangeably, particularly the data file, thereby greatly increasing its usefulness to one another as a joint effort.

We come finally to the mature and experienced engineer of advancing years. How can he make engineering and technical literature of use? It is safe to say that when an engineer has much passed fifty or sixty years of age and has led an active life, his need for engineering literature lessens. Out of the mass of detail which seemed to him so overwhelming and endless in his youth and early manhood, fundamental principles emerge like peaks out of the clouds, and upon these as foundation all detail classifies itself simply and naturally, and therefore, he feels less need for accumulated data or particular description. Probably no one enjoys engineering reading as does the mature engineer, for he can read between the lines and find much to instruct as well as interest, and yet while he is probably the most interested and intelligent reader of engineering literature that the journals have, his ambition as a collector is gone and filing systems no longer appeal to him.

If his acquaintance is wide, he reads with interest the accomplishments of his friends, and the addresses of society presidents and articles on the ethics of the profession. Of failures he is the keen student. The personal column appeals to him, and if he is of right-mindedness he is conscious of more pleasure than formerly in the accomplishments of those who have succeeded and succeeded well in dire and burdensome responsibility. More often than the young man he will turn back for his satisfaction to papers that served him well in times past, and perhaps smile at the lack of improvement that later attempts to deal with their subject often show.

Technical papers, along with the technical societies and their proceedings, form the repository of the professions; they are the interchange of experience, the common store upon which we all draw. Without them we would be strangely helpless. We are indebted to every one more or less who records his experience for the common use, and that debt we should endeavor to helpfully repay in kind, but wisely, concisely and thoughtfully.

The Fort William plant of the Steel Company of Canada, on which construction was started last year and not completed owing to the dull manufacturing season, has resumed operations and a large gang of men is at work on the completion of the building. The plant will be ready for operation between November 15th and December 1st.