

connection arrangements are made for the demonstration of improved models with a wider range of adaptability which are placed on the market from time to time.

Applications by Departments for office machinery must be submitted to the Public Service Commissioner for approval prior to purchase. Each application is carefully investigated, and if it is established that the Department's operations are suited to mechanization and the purchase is an economical proposition the application is approved. Subject to these conditions, Departments are encouraged to make the fullest possible use of labour-saving machinery.

The latest types of book-keeping machines have recently been installed in several of the larger Departments, but the most important advancement made in the past year is the adoption of what may be termed the "punched-card" system. This equipment has now been installed in several Government Departments and is working very satisfactorily.

There are two makes of punched-card equipment manufactured, but they are almost identical in operation. A brief description of the system, which involves three basic processes, may be of interest. In the first place, accounting and statistical transactions of every description are registered on cards of standard size by perforating holes in predetermined positions to represent definite values, descriptions, or designations. The perforations are made by means of a punching-machine and the punching of holes is the quickest known method of recording such data. The amount of information which can be incorporated on one card is surprising. Each card accommodates all the essential facts appertaining to the relevant transaction and provides an unchanging record which can be interpreted visually and is also capable of mechanical selection and tabulation. Experienced female operators can turn out punched cards with great speed and accuracy. As the cards form the basic records for the whole system the punching is verified on a machine which automatically detects any errors.

The second process is the sorting of the cards into any required order. This is done by an automatic sorting-machine which mechanically senses the perforations in the cards and automatically groups and arranges them in whatever order may be desired. The sorting machine handles the cards at the rate of twenty-four thousand per hour.

The final process is the tabulation of the cards—that is, the translation of the information represented by the holes into words and figures and printing the results on suitably prepared forms. The production of the results includes the automatic segregation of debit and credit items and the printing of sub-totals, grand totals, and accumulated balances at predetermined points. The tabulating machine prints at speeds up to seven thousand five hundred per hour.

Punched-card equipment has been in use in the Census and Statistics Department for many years, but there it has been employed on purely statistical work. Incidentally, the machine was originally invented to cope with this type of work, but now its possibilities for accounting processes have been recognized, and the modern machines can provide all the attachments necessary for this purpose.

The equipment is rather expensive and consequently a complete installation is economically justifiable only in those Departments where there is a large volume of accounting or statistical work. In order to meet the needs of those Departments whose work is adaptable to the system but where the volume does not warrant the purchase of a complete equipment consideration is being given to the installation of a central plant on which the work of the smaller Departments may be handled. Even with some of the larger Departments it may be possible to combine their work on one plant. There is no doubt that this equipment has wonderful labour-saving possibilities, and its application to various phases of departmental activities will develop materially when it has passed what may be termed the experimental stage so far as this country is concerned. In England and America it is very widely used, but there is a tendency here to regard it with a certain degree of conservatism, particularly in regard to its application to accounting processes.