

In most large exchanges thousands of calls a day come in for the right time, which is given free. The results of baseball matches and of other important events are communicated promptly on inquiry, and special provision is often made to deal with such demands. People are called at early hours in the morning. All this is done free.

Private-branch exchanges are numerous and large in all the principal cities. As a rule there is a telephone in every bedroom of all the leading hotels. Some of these have a dozen operators, six or seven being on duty at the same time. Large department stores, railway-stations, and the like have considerable installations, six hundred to a thousand connections being not unusual.

Telephone-booths are placed in hotel-lobbies, in railway-stations, and in the lobbies of large buildings somewhere adjacent to the elevators. In many cases there are attendants, and the fee, usually 5 or 10 cents, is paid and the person required got before the user enters the booth. In other cases he either pays before calling or after calling and before speaking. Coin-boxes are used in these cases. Throughout American cities very liberal distribution of telephone call-boxes for use by the public exists. They are placed in hotel-lobbies, druggists', tobacconists', and confectioners' shops, and in restaurants. Sometimes the telephone is in a box that the user enters, and which is fairly sound-proof. In many cases the telephone is on the counter or affixed to the wall. The writer has often found these call-boxes, both in the States and in Great Britain, a great convenience.

There are really no fixed principles governing the question of tariffs. Some companies, such as the Independents, generally prefer a flat rate: it has less complication. Companies operating automatic telephones argue that there is no need for measured service, as, girls being dispensed with, the only point to be considered is wear-and-tear of apparatus, and experience has shown that can be neglected. Automatic exchanges can be provided which take care of measured service. It was noticed that there is arising a demand amongst the public for meters at the substation, due to want of confidence in the record kept at the central station under the manipulation of the operator. Telephone engineers do not view any such innovation with satisfaction. The Chicago Commission has laid it down by ordinance that the Bell Company there must place a meter at the subscriber's end, and this may extend. Most Bell companies favour flat rate in all exchanges under 2,000 lines, and measured rates in all larger exchanges. Party lines are provided at flat rates in residential districts. There is a large number of party lines in force in most large exchanges, both Bell and Independent. Arrangements are made to avoid ringing any but the required party. These lines, however, are more liked by the people for the sake of the rate than for any other quality. Conversations can be mostly overheard by the parties, and the line is not always available when it is wanted. Companies find such lines more costly to maintain, and many of them are striving to avoid party lines as far as possible. It is recognized, however, that they get people accustomed to the telephone, and this results often in a better grade of service being taken.

It can safely be said that the consensus of qualified telephone judgment is in favour of measured service as being the most equitable to all classes of users, as small users get service according to their use, and large users are being similarly treated. There are considerations of checking, recording, and accounting that are introduced with measured service that have to be weighed. In the States some commissions when reviewing rates pronounce for flat rates, others for measured rates. Monthly payments seem to assist in securing and holding telephone subscribers. People pay the smaller frequent amount more willingly than they do the larger but less frequent amount.

In all large cities and in most small ones the central-battery manual board is used, except, of course, where automatics have been adopted, and in connection with that system most plants are being converted so as to use a central battery at the exchanges instead of local batteries at the subscribers' stations. New automatic exchanges are always equipped on the central-battery plan.

Magneto-telephone exchanges are practically obsolete. They are to be found in comparatively small places, sometimes in larger places where for one reason and another the displacement of the system by something better has been deferred. Inquirers as to the methods of giving telephone service in this country were never impressed when informed that we were operating so many stations by magneto systems. The experience in the States has shown that it is economical as compared with magneto systems to install the central-battery system in exchanges having not more than two hundred and fifty to three hundred subscribers.

#### *Farmers' Lines.*

From time to time a great deal is heard of what is being done for the farmer in the matter of telephone facilities in the United States. There can be no doubt that the number of farmers who have these facilities is large and increasing. The farmer, it will be found, does a great deal for himself. Conversations with persons engaged in the telephone business in the States for many years show that farmers' lines are of various grades according to circumstances and location. It has frequently happened that a knot of farmers would combine and run a line, erect it cheaply, and make an arrangement with some telephone company to give them service at a moderate rate. Faults will, however, occur, and as no one is specially told off to repair them the service soon becomes inefficient. Poles rot and the line falls into decay. Thousands of miles of telephone-lines have had this experience. In other cases farmers combine and form a company, or some person undertakes to form a company to operate in a certain area that will suitably serve a large number of farmers. Magneto switchboards are generally used; poles are cheap; iron wire is employed, but generally a superior-grade service to that just referred to is given according as repairs and maintenance receive attention.

A concrete case will illustrate. A company has two thousand telephones in four towns, population from four hundred to three thousand. There is no manufacturing industry. It is a rural district, and half the telephones are held by farmers, as might be expected. Toll lines run to about twenty-five surrounding cities. The total length of the toll lines is about three hundred miles, so that any one line would be comparatively short. Each farmer may speak free of special rate to one town only. The local rate between towns is 5d. for three minutes, although the three-minute period is not strictly enforced. The farmers' rate is £3 2s. 6d. a year. The company builds the farmer's line, and figures