

only £2 for ten words, and £3 10s. for twenty words, which is a very great reduction on the Indian rates *via* the Persian Gulf, where, until lately, a minimum charge of £5 1s. has been demanded.

Before alluding in any way to the proposals for completing the telegraph to Australia, I may, perhaps, still further illustrate the great difficulties which have presented themselves in working the lines through foreign States, where they have insisted on employing their own operators and clerks, and how the works now under construction will effectually remove these difficulties.

I will take, by way of example, the Malta and Alexandria line. When this line was first laid, many of the messages occupied fourteen days from London to Malta and Alexandria, and when received were perfectly useless. These delays were caused chiefly on the Italian circuits, through the apathy of the operators employed by the Italian Government. A concession was then granted to the late firm of Messrs. Glass, Elliott, and Company, who were lessees of the cable, allowing them to employ English telegraphists for working through the business brought by the Alexandria and Malta line. A great improvement in speed and accuracy was soon evident, and answers were received in Alexandria from London in forty-eight hours, the revenue at the same time increasing from £200 to nearly £3,000 per week. This improvement, however, lasted but for a comparatively short period—the Italian Government getting jealous of the English clerks, the Company had to remove them, when the usual delay and mistakes again occurred, and the receipts fell again to £700 weekly.

The cause for this unsatisfactory state of affairs can only be traced to a bad system of management. Mr. Glass says that on one occasion a message from Sir Charles Wood was sent from Alexandria to Malta in five minutes, but although a message of great importance on business of the State, it took the whole day to send it from Malta to the first Italian station. The only satisfaction that could be obtained was that it must wait, as they had their own State messages to dispatch, which in many cases may have been some clerk asking another clerk, at another station, some unimportant question.

Then again, the through messages are often delayed a whole day or more, being considered subordinate to local business. With the Turks and Egyptians matters are still worse, as they are known to retard the despatches entirely through willfulness or idleness. A clerk will perhaps watch the instrument, smoke his cigarette, and say "Let them call," if he is not too lazy even to make that remark; and to show to what extent this is carried in Egypt, the Viceroy, although he has the whole thing in his own hands, and his own clerks, prefers paying the Malta and Alexandria Company some £200 to £300 a year for his private messages, rather than send them by the State lines. Now, with such material, is it to be wondered at that the telegraph system between India and Europe has been the laughing-stock of the world? In spite of this, between Constantinople and Fao, a distance of 1,950 miles, there was, in 1866, only two English and two French inspectors—the rest of the staff, including instrument clerks, were Greeks and Armenians.

Happily, however, this wretched apology for a telegraphic organization is nearly at an end, the lines alluded to being in a forward state, and, when open for traffic, will be worked under one management, and entirely by English electricians and operators. An improved system of automaton repeating will also be adopted, so that the transmitting clerk in London, at one operation, will be able to forward the message direct, either to Calcutta or Sydney.

This ingenious arrangement, although by no means new, I will explain more fully presently. I do not wish you to understand that the direct signalling will always be made use of, nor would it be always expedient to do so, as in that case the entire line would, in some instances, be occupied with a message, perhaps between two intermediate stations, when, by dividing it into sections, several local or short distance messages could be going at the same time. It is also necessary for long circuits, or where a system consisting of many circuits is worked as one, to transmit much slower and firmer than when working over a few hundred miles of line.

Not only will the new lines in progress be the means of augmenting the speed of telegraphic communication between India and England, but they will stimulate the representatives of the several administrations at present in operation to increased vigour, and will, I have no doubt, cause the French and Austrian Governments to give additional facilities and, perhaps, special wires for the through business, rather than lose the tolls now charged for messages passing over their lines. The charges have already been considerably reduced, and, as competition is sure to follow, a further reduction may be anticipated.

There is also an additional reason why English messages should, if possible, be confined entirely to lines under British control and worked by English operators. It is pretty well known that all telegrams passing through France are liable to inspection, and, if considered of sufficient importance, copies are retained, which are placed before the Director-General of Telegraphs, and not sent forward until he gives his consent. This is a matter of very serious moment, where State telegrams of the utmost consequence are concerned, perhaps referring to the very Government through whose hands they have to pass. It may be said they could send their messages in cipher, but cipher messages are anything but safe, as the alteration of a single letter may alter the sense and meaning of the whole despatch.

The working of the lines through India has been by no means satisfactory, as may be gathered from the official reports of the Director-General of Telegraphs in Calcutta. The average time occupied in the transmission of messages between Bombay and Calcutta was forty-eight hours. Now, this, to me, appears perfectly incomprehensible, unless the operators try all they can to retard the business instead of facilitating it.

In these Colonies—take the Northern circuit for instance, from Sydney to Townsville, nearly the same distance—I have seen replies to messages received in Sydney within the hour by hand-repeating at Tenterfield; and this may be considered a busy circuit, there being only one wire for the whole of the business between this Colony and Queensland, and the intermediate messages for thirty-four stations.

There is certainly one very great difficulty which presents itself, even on well-conducted lines, that is, in bad weather, or during atmospheric disturbances, the impossibility of making the instruments record the signals correctly. The atmospheric wave, when a thunderstorm is near, will com-