

respective territories and assign the telegraphers. Only a small proportion of the telegraph business originating and developing in the larger cities is filed at and delivered from the main offices. It is principally filed at or delivered from branch offices located conveniently to business centres. There are approximately 500 branches in Chicago, 800 in New York City and a number corresponding to the needs in Montreal, Toronto and other large cities. These branches or city line feeders—excepting grain exchanges—work only with the main offices; so that, when a person files a telegram at a branch office in Toronto destined for, say, Saginaw, it is transmitted to the main office, relayed to Detroit, thence repeated to Saginaw. In the event of especially long messages or press dispatches even the otherwise obscure hamlet may be put in direct connection.

Although Chicago has direct wires to more places than any other city—thus making it the great relay centre, still it is impossible to have direct wires everywhere, for economic reasons as well as for advantageous operation. And, while Chicago “works” with the larger cities direct, north, east, south and west with duplexed and quadruplexed circuits, the distant small town business is handled through intermediate relay offices. Although it is practically impossible to elucidate to the uninitiated the reason and necessity for repeated relays, sometimes a thousand miles round-about to reach a point a hundred miles distant, it is obviously better that he never hear of the devious route his message sometimes takes and which is in fact the shortest cut though maybe the longest way round.

An important adjunct which obviates delays formerly caused by country offices having to call relay offices an indefinite length of time to “raise” them, are the concentrators. These are group switchboards on operating tables. There may be, say, sixteen wires entering one concentra-

tor with a total of, perhaps, one hundred offices on them. Instead of calling indefinitely to ears riveted on an independent instrument yards away as formerly happened, the outside office, by making a brief combination on the wire, lights a tiny lamp in front of the operator at the relay office, who has the entire sixteen wires under his control in the concentrator before him, and who is enabled to give immediate attention to calls.

The average person who files a message adds the strict verbal injunction, “Rush that right off”. This, of course, is but human and in keeping with lack of knowledge of the inner workings of the telegraph. Especially is the request emphasized at a time when wires are known to be impeded by prevailing storms. There is no delay on the normal wire.

Considering the vast territorial extent of Canada and the United States, telegraphic communication between their widely separated districts is remarkably well maintained.

Judgment is used, of course, in putting ahead messages whose nature manifestly demands the utmost dispatch. This is the especial duty of the traffic chiefs.

Occasionally telegrams circumlocute the entire continent before reaching their address. For instance a message was filed at Omaha for Denver. Ordinarily Omaha “worked” direct with Denver, a distance of less than 400 miles. On this occasion the wires were “down” west and south-west. Chicago was asked to handle the message. A routing was given it and that message was sent by Chicago to New York, from there to Toronto, relayed on to Winnipeg, from Winnipeg to Vancouver, from Vancouver to Seattle, Seattle to San Francisco, thence to Oakland, repeated to Salt Lake City and finally relayed by Salt Lake City to Denver.

The great volume of telegraph business is filed by the large industrial and commercial concerns, and it is only by means of the modern facili-