

pneumatic bell ringer, and double pneumatic sanding device. The driving springs are of the half-elliptic form.—Railway and Engineering Review.

### An Hotel Telephone System.

The Bell Telephone Co. has just completed the instalment of a telephone system in the Windsor Hotel, Montreal, which is one of the best and most up-to-date of its kind in America. It is of the same general plan as the system in the Auditorium hotel, Chicago, and the ones now being installed in the Holland house, and the Manhattan hotel, New York. It is arranged so that the various rooms can inter-communicate or call the hotel officials and employes, thus saving much time to guests. In addition, city and long distance connections in the Bell Telephone Co.'s system can also be had without the necessity of going to the public pay station. All instruments are of the long distance common battery type, having the parts arranged in the most compact manner possible.

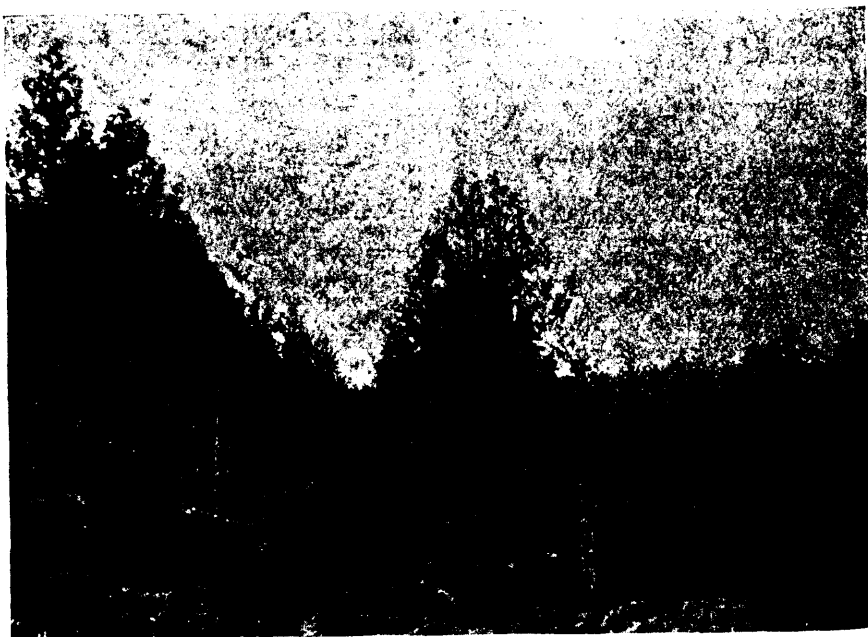
From the instruments rubber covered wires are carried along the corridors in a hollow wooden moulding, painted to match the walls, to either a ventilating or elevator shaft, where they are connected to switchboard cables which run down the shafts in wooden moulding, and which in turn are connected to lead covered cables in the basement. These last cables are run to a small iron distributing frame similar in design to those used in central offices. While the wires, cables and connecting boxes are concealed completely, they are readily accessible for repairs or alterations without disturbing any of the arrangements of the hotel. From the second side of the distributing frame the lines are carried in switchboard cables up to a room immediately above on the ground floor, in which is situated the switchboard. This room opens on to the rotunda near the office, and is used as a public telephone pay station, as well as an operating room, four booths being installed for this work. The switchboard is of the usual common battery style, and is arranged for three operators' positions and 600 lines, 400 of which are installed. The line signals are of the electro magnetic type, and the supervisory are small incandescent lamps. The woodwork of the switchboard, counter and booths is of mahogany, handsomely finished, the whole presenting a fine appearance. The power to operate the system is obtained from storage batteries placed in the same room as the distributing frame, but partitioned off from it. Two sets of cells are provided, one being charged while the other is discharging, the charging being effected by a two h.p. dynamotor run from the house circuit. One one-sixth h.p. dynamotor designed to run from the batteries is used to furnish current for ringing the bells. The switches, starting boxes, fuses, ammeter and voltmeters are all mounted on a slate and iron switchboard in the same room.

To call the operator it is only necessary to remove a telephone from its hook, this operates a signal in front of the operator, who replies by inserting one of a pair of plugs in the jack in the usual way. If the call is for an employe of the hotel it is switched through to the proper department by inserting the second of the pair of plugs in the jack connected with the line of the department wanted. In front of the pair of cords are two small incandescent lamps. When a call is answered the lamp connected with the cord used in answering does not light up, but when the second of the pair of cords is inserted in the jack the lamp connected with it remains lit until the party called for has answered. As long as the conversation continues, and the two telephones are off the hook, the two supervisory lamps remain dark, but as soon as the telephones are placed on the hook,

again these lamps light up, notifying the operator that the conversation is finished and to disconnect. This obviates the necessity of the operator cutting in to ascertain whether the conversation is finished, as the lamps lighting in front of her are a positive signal to her to disconnect. If a city call is required, the call is switched to one of the central

offices, and is there handled exactly like a local call would be.

C. W. Johnston, who has been appointed G.T.R. travelling passenger agent at Montreal, was heretofore clerk in the Bonaventure station ticket office there.



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