

## APPENDIX No. 1

No. 61.

CLEVELAND, OHIO, May 5, 1905.

Select Committee on Telephones,  
House of Commons,  
Ottawa.

HONOURABLE SIRS,—This company produces two distinct types of telephone apparatus: Magneto (local battery and hand generators at exchange and subscriber stations), and Central Energy (power generators and storage batteries at exchange only.) The Magneto type is used for small village exchanges and invariably in rural service.

Its simplicity admits of repairs by the unskilled, and the Magneto generator is the surest signalling device on long lines loaded with a number of telephones and exposed to the elements. A result can be obtained, such as it is, with a line in an indifferent condition; for it gives forth a 70 volts-alternating current, very penetrating, while the central energy is less than 35 volts direct current. The action of the hand generator rings the bells of others on the line, or, if the line is connected with an exchange, it throws a shutter, exposing the line number, on the simple principle of an annunciator drop.

Central Energy systems facilitate speed of service in towns and cities; the subscriber signals exchange by simply removing the receiver from the hook and the operator has more complete supervision of the line—busy wires and termination of conversations, by a system of electric light signals.

Signalling current is thrown to line by power generators; the talking circuits are from storage battery used also as an auxiliary to the ringing circuits in case of break down or when the original source of power is dormant. This system should be employed for economy of maintenance, in installations above 450 line, in a radius of three miles, if a cheap and sure outside power can be obtained. An independent gas engine power plant will be justified in installations above 1,000 lines. It is not recommended for rural lines as it requires a construction absolutely free from ground, and its inaccessibility to competent inspectors.

## RURAL TELEPHONY.

Telephones in farm communities have usually started by a farmer building a line from his own home to that of a son-in-law. Others saw the advantage and joined them. An appreciation of the rural telephone, as an institution, will be found in the pamphlet, 'The Voice of Progress.' The apparatus is of the simplest type, to admit of working under adverse conditions, adjustment and installation by the unskilled—in the parlance of the trade, it is 'fool proof.'

Farm lines are usually heavily loaded—sometimes as high as fifty instruments on a circuit. In such cases it is necessary that all ringer coils be wound to exactly the same resistance, and the generator have sufficient capacity (number of bars in the magnets) to operate all ringers. Type 'K' is the one produced by this company for the character of service. Below is the various capacities with their price, followed by a detailed description.