

The batteries are connected with a cut-in jack mounted at one side of the battery cabinet, so the sending instrument may readily be connected with the desired voltage. The sending station is also provided with a head receiver which is connected by a separate circuit to a highly sensitive transmitter placed in the band-stand as shown in Figure 3 at the left of the piano, to enable the soloist to hear the orchestra and band and keep in time and tune with the accompaniment.

One of the reproducing instruments is shown in Figure 1, suspended in a tree at the right of the centre of the picture. It consists of a very powerful bi-polar horse shoe magnet receiver, provided with a large megaphone attached

to the earpiece. The megaphone is painted black so it is not easily seen when placed in the trees above the lights.

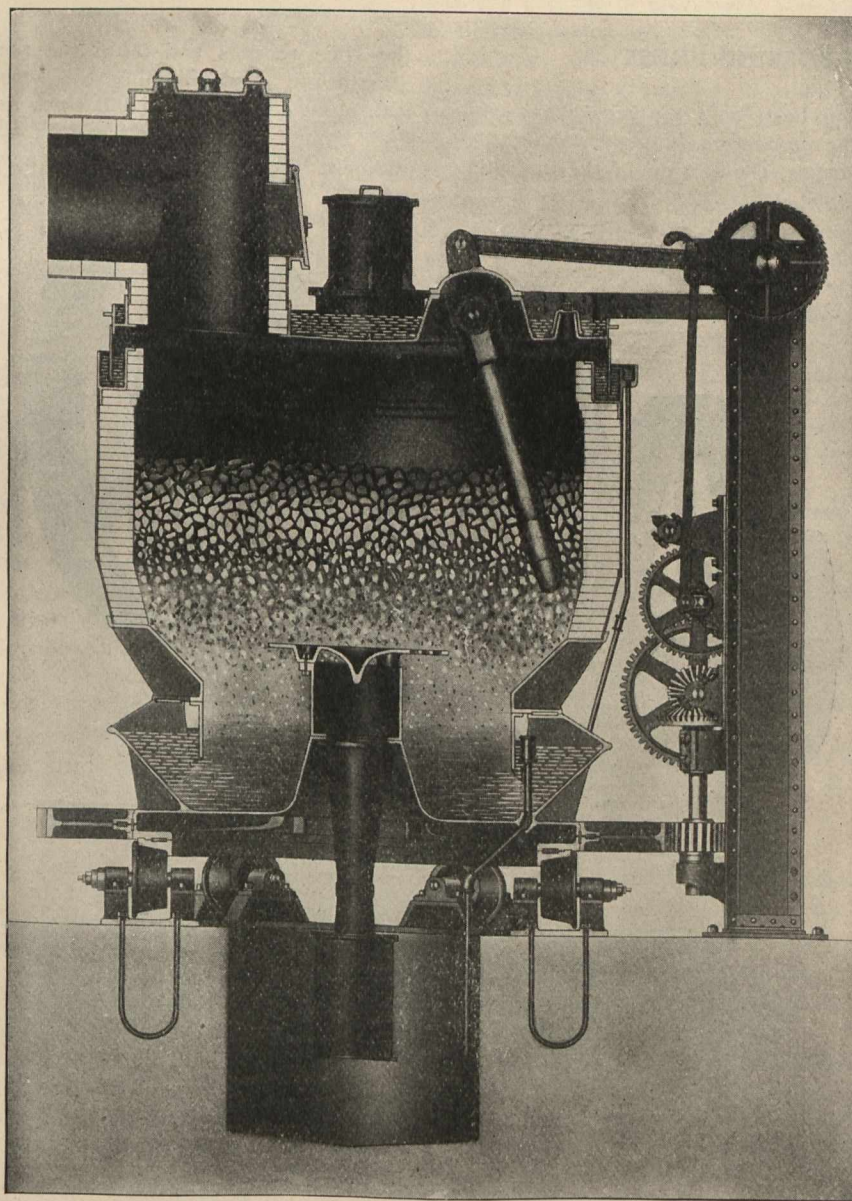
The rubber covered wire which is used to connect the reproducers with the sending station is run directly into the receivers and is thoroughly wrapped, where it enters the shell, with rubber tape to prevent moisture entering the working parts.

This demonstration not only opens a field for telephone apparatus that may be developed to an extent almost without limit, but it also shows the great efficiency and durability of the transmitter, as made at the present time, which is of considerable interest to every manager and owner of an independent telephone system.

A MECHANICALLY POKED CONTINUOUS GAS PRODUCER.

The accompanying illustration is a sectional view of the Hughes Patent Mechanically Poked Continuous Gas Producer, which is manufactured exclusively by The Wellman-Seaver-Morgan Company, Cleveland, Ohio. The special feature of the producer is the mechanical poker, which is a water-cooled steel casting suspended from a trunnion.

nated and the fuel is not subjected to the variations in treatment incidental to hand poking. The uniform treatment secured by the mechanical poker has proved especially beneficial, it is stated, giving better and more uniform results as to the quality, quantity and supply of gas, and thus reducing the number of producing units and the size or number of buildings required for a given capacity. Under average conditions the capacity of the mechanically poked producer is claimed to average 25 lbs. per hour per



Mechanically Poked Gas Producer.

The poker is oscillated by an eccentric rod in connection with a ratchet wheel, which in turn is oscillated by a pawl connecting with a crank driven through a reduction gearing from the main shaft. This mechanism moves the poker back and forth radially, agitating and breaking up the mass of coal while it is revolved bodily with the producer, and also assisting in distributing the coal and working down the ashes for removal. Thus hand labor in poking is elimi-

square foot of producer area, and frequently 30 lbs. per square foot may be gasified for long intervals. The nominal capacity for the Hughes Mechanically Poked Continuous Gas Producer is one ton of coal per hour per producer, basing this estimate upon the standard size of producer, which is ten feet in diameter inside of the fire brick lining.

The main shaft and gearing are supported by steel frame work securely braced to the top of the producer. The