(No Model.)

J. W. SEE.

TELEPHONIC APPARATUS.

No. 350,160. Patented Oct. 5, 1886.

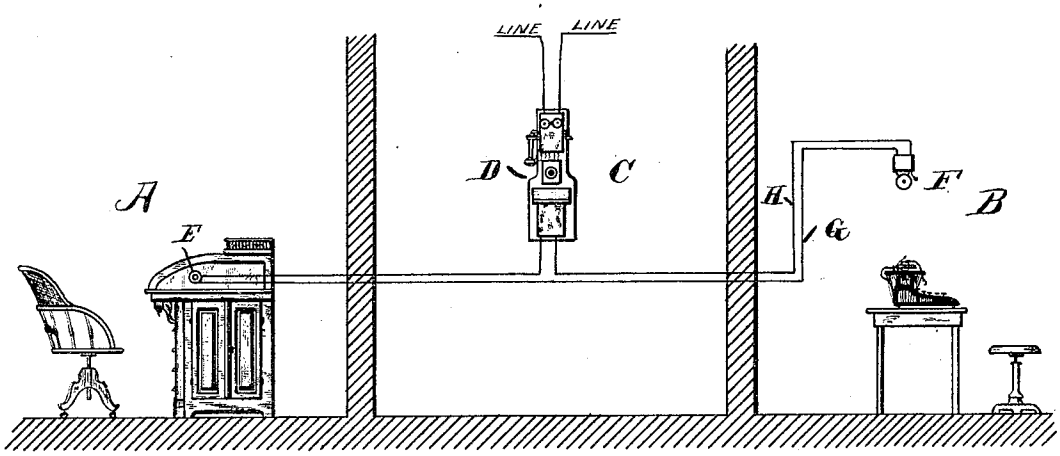
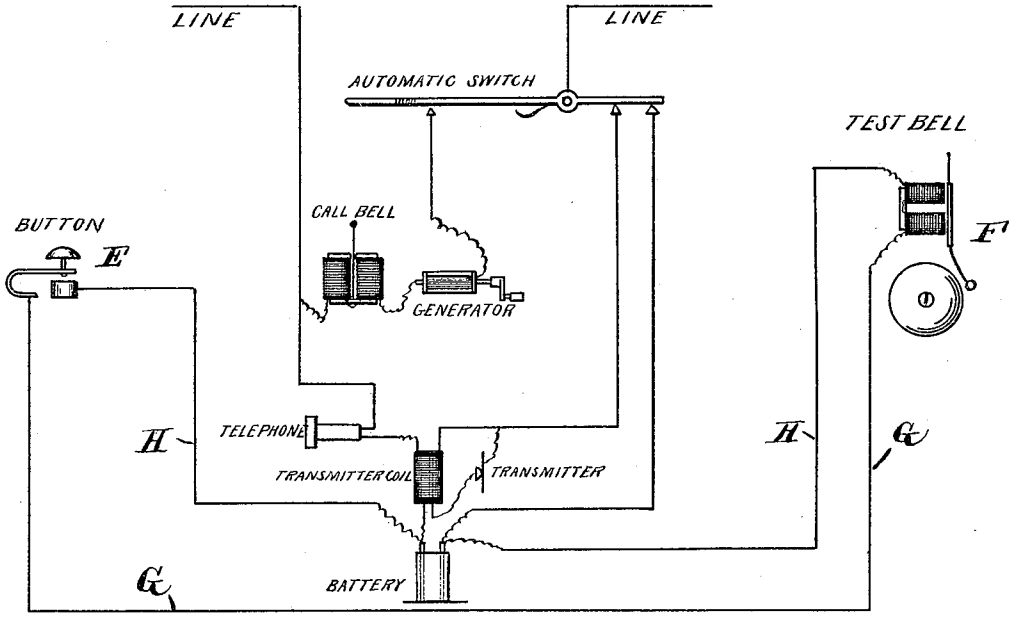


Fig 1



Witnesses:
W. A. Seward
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Fig 2

Inventor:
James W. See

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JAMES W. SEE, OF HAMILTON, OHIO.

TELEPHONIC APPARATUS.

SPECIFICATION forming part of Letters Patent No. 350,160, dated October 5, 1886.

Application filed September 22, 1884. Serial No. 143,642. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. SEE, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Telephonic Apparatus, of which the following is a specification.

Open-circuit batteries are largely used with telephonic transmitters. The batteries lose their power by reason of regular use in telephonic operations, and also by reason of being accidentally short-circuited by derangement of the automatic switch employed to keep the battery-circuit open when the transmitter is not in use.

Telephone-exchange managers seek to keep their batteries up to full strength by two different plans. By one plan periodical visits are made to the subscribers' premises and the batteries recharged. By the other plan the batteries are allowed to weaken until the subscribers complain. Periodical visits are expensive. They often result in overcharging the batteries and soiling the premises, and they will not at all meet cases of accidental short-circuiting. Depending on complaints from subscribers is a failure, for the simple reason that the subscriber always finds fault with the talker at the other end of the line, knowing nothing of his own weakness as to transmitting power. As he hears a weak talker to-day and a strong one to-morrow, he can form no idea as to whether things are generally weak or not. Hence the weakening of batteries constitutes one of the gravest sources of exchange trouble to the telephone service of to-day.

The object of my invention is to provide an apparatus by which the subscriber becomes, innocently, the means of daily applying to his transmitter-battery an unfailing test as to its strength.

The invention will be understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 represents a suite of offices representing a subscriber's station, and Fig. 2 a diagram illustrating the circuits, both of the figures exemplifying my present invention.

In the drawings, A represents the inner office of a suite belonging to a telephonic subscriber; B, the front office of the suite, which front office we will assume to be in charge of a subordinate—say a clerk or type-writer operator—who is subject at all times to the call of his chief; C, an intermediate office of the suite; D, the usual subscriber's telephone apparatus, shown as located in the intermediate office, though, as will be hereinafter understood, it is immaterial to the present invention upon what part of the premises it is located; E, a push-button or other circuit-closer placed upon the chief's desk or elsewhere within his reach; F, an electric bell located in the front office, or it may be elsewhere within hearing of the subordinate; G, a wire from the electric bell F, which bell I will herein term the "test-bell," to the push-button E; H, a wire from the test-bell to the push-button, and passing through the transmitter-battery.

The relation of parts will be fully understood from the diagram in which will be found delineated the ordinary circuits of the telephonic station apparatus.

The transmitter-battery is connected up for its usual service in the usual manner. The wires H and G form an open circuit, including the test-bell, the transmitter-battery, and the push-button. The test-bell may be a single-stroke bell, a vibrator-bell, or a buzzer. The resistance of the test-bell should be such that the test-bell will not operate in case the battery is too weak for use as a transmitter-battery. If the push-button be pressed, the test-bell will ring, provided the battery has sufficient strength.

The test-bell may be used as an ordinary office call-bell, by which the chief calls his subordinate to him, and the apparatus can be applied to store-rooms, warehouses, and, in fact, any premises where one party is subject to the call of another some short distance away. Codes of signals may be arranged by which different parties may be called, and a multiplicity of push-buttons and bells may be placed in circuit, if desired, for the purpose of enabling a called party to respond. The use of the battery in ringing the test-bell does not interfere with its simultaneous use as a transmitter-battery, and its use does not, to any great extent, detract from its durability as such. This test apparatus being placed upon the subscriber's premises, say, at slight increased periodical charge to the subscriber,

provides him with very efficient office-call facilities—facilities which he will not fail to avail himself of. In the daily use of the bell the subscriber will become aware of any serious weakening of his transmitter-battery. Should his transmitter-battery become seriously weakened, he will become at once aware of the fact, and will be led to complain to the powers that be, not that his transmitter-battery is weak, but that he is being deprived of one of his office conveniences. By properly adjusting the resistance of the test-bell this complaint of the weakening of the battery is liable to occur some time before the battery becomes too weak for transmitter purposes.

I do not broadly claim a battery connected up so as to be used for either a signaling-battery or a transmitter-battery, as I am aware that a transmitter-battery at a telephonic station has been arranged to be switched onto the main line for signaling purposes when the line is switched off of the telephonic circuit.

I claim as my invention—

A line-circuit including a telephone-transmitter, a local circuit including a test-bell and a circuit-closer, and a battery independently connected unto each of said circuits, combined substantially as and for the purpose set forth.

JAMES W. SEE.

Witnesses:
W. A. SEWARD,
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