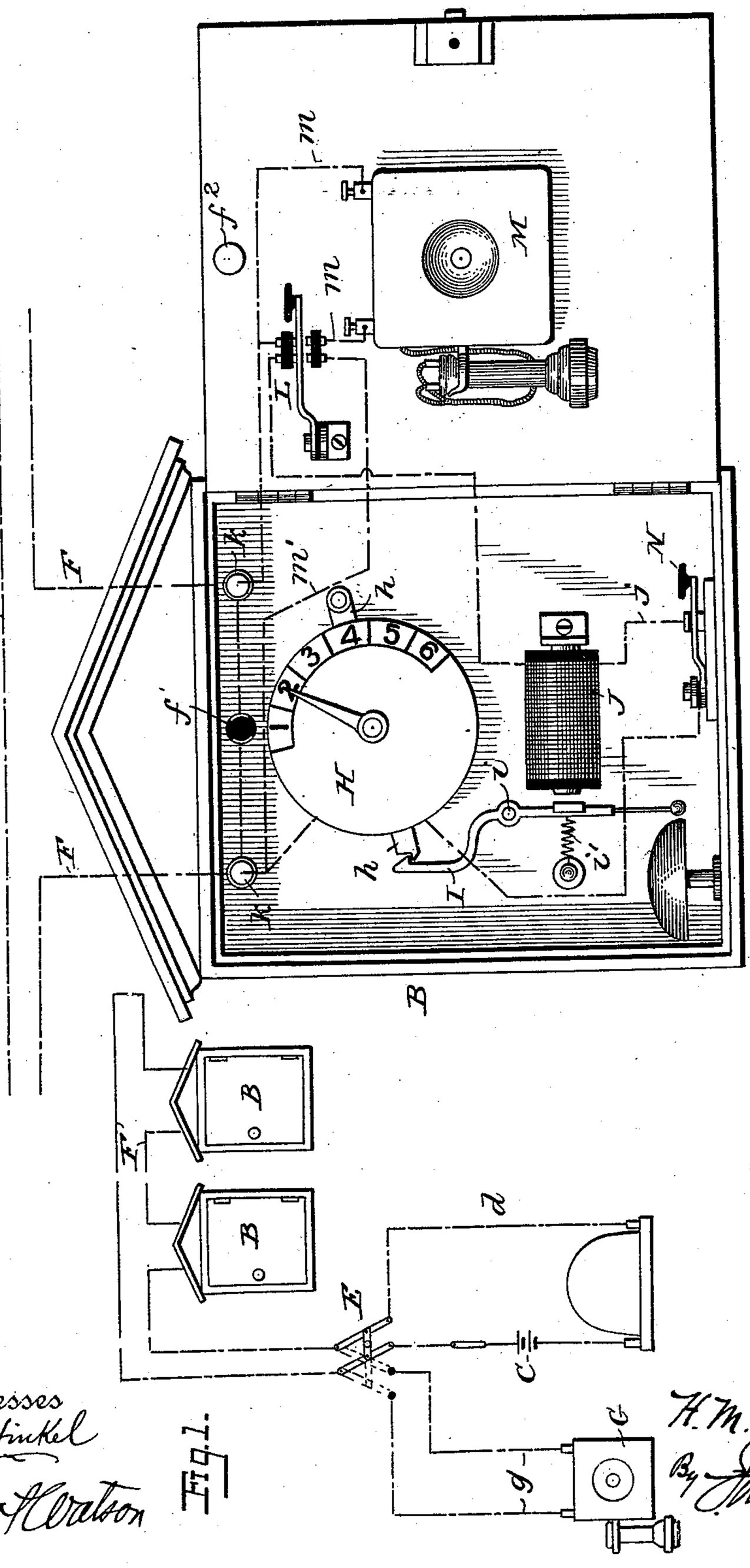
(No Model.)

H. M. SEITZINGER.

COMBINED MUNICIPAL TELEGRAPH AND TELEPHONE SYSTEM.

No. 528,566. Patented Nov. 6, 1894.



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HARRY M. SEITZINGER, OF WILKES-BARRÉ, PENNSYLVANIA.

COMBINED MUNICIPAL TELEGRAPH AND TELEPHONE SYSTEM.

SPECIFICATION forming part of Letters Patent No. 528,566, dated November 6, 1894.

Application filed May 28, 1894. Serial No. 512,640. (No model.)

To all whom it may concern:

Be it known that I, HARRY M. SEITZINGER, a citizen of the United States, residing at Wilkes-Barré, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in a Combined Municipal Telegraph and Telephone System, of which the following is a specification.

My invention relates to combined municipal telegraph and telephone systems, and it has for its object improvements in such systems which are directed to facilitate the use of telephones upon circuits which include signal or telegraph instruments.

The invention applies more particularly to systems employing magneto telephones and it embodies an automatic locking device for the signal instruments of the box stations, and other details of construction to be hereinafter pointed out.

Referring to the accompanying drawings, which form a part of the specification, Figure 1 is a diagram of so much of the apparatus at the central station as it is necessary to illustrate in connection with my invention, and of the line and a series of boxes or stations, and Fig. 2 is a view of one of the boxes opened and showing the apparatus therein.

In the drawings A indicates the central station, and B B the line or box stations. At the central station are the usual instruments for receiving the signals and messages, which instruments and the battery C are on a local circuit *d*, which, as shown in full lines, is connected by the switch E with the main line F. The switch E, which is of common construction, is designed to connect the main line F either with the signal or telegraph circuit *d*, or, as shown in dotted lines, with the circuit *g* of the telephone G.

Referring to Fig. 2, *f* indicates a shunt circuit in which there is a switch *f'* adapted to be closed by a pin *f''* in the door when the latter is closed, thus cutting out all of the apparatus in the box when the station is not in use. H indicates the usual call or alarm instrument, which is operated by the lever *h*. One end of the lever *a* is arranged to be locked by the hooked end of the locking lever I, which is pivoted at *i* and operated in the direction to lock the lever *h* by a spring *i*, and in the opposite direction by an electro-magnet J in the circuit *j* which passes through the signal instrument H. This circuit *j* is taken from the terminals *k k* of the main line. In the circuit *j* is a spring switch L which is normally closed. This switch is provided with a button or lever so that it may be conveniently opened and held open by the hand when it is desired to use the telephone M. When the switch L is opened, the telephone M is connected with the binding posts *k k* and with the main line through the wires *m* and the branch *m'*.

The operation of the invention is as follows: The switches E and L are normally set so that the signal and telegraph instruments and the battery are on the line wire, and when in this position these instruments may be used in the ordinary way, the telephones at each end being entirely cut out. When it is desired to use the telephone, which, it is to be understood is a magneto-telephone, the box is opened and a signal is sent to the central station either by means of the call instrument H or a special key N, indicating that it is desired to use the telephone. The attendant at the central station then throws the switch E into the position shown in dotted lines in Fig. 1, and the person desiring to use the telephone at the box station opens the switch L and connects the telephone with the line. It will be obvious that all of the resistance caused by the various instruments are thus cut out, and the telephone can be used to the best advantage. When through using the telephone the attendant at the central station restores the switch E to its normal position and the person at the box releases the switch L and closes the door.

From the above description it will be evident that while the switches are so set that the circuit *j* is in communication with the main line and battery, the magnet J will be energized and locking lever I will be thrown out so as to free the operating lever of the signal box. When, however, the current is cut out of the circuit *j*, either by means of the switches E or L, or by the short-circuit *f*, the locking lever will be released at the magnet and the spring *i* will throw it over so as to engage the operating lever *h* and lock the latter. Ordinarily when the door of a signal box is opened the operating lever *h* will be simul-

taneously released so that a signal or message may be at once sent to the central station. If, however, another telephone at some other box is in use, the battery C will be out of communication with the main line, and upon opening a second box the operating lever *h* will remain locked, there being no current to pass through the magnet J and the person at said box will be thus notified that the line is in use for telephone purposes. As soon as the telephone is cut out at the switch E, the lever *h* will be released, and the desired signal may then be sent in.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a combined telegraph and telephone system, the combination with the central station, the main line, the battery for said line and the switch at the central station for cutting out said battery, of sub-stations, each provided with a telegraph or signal instrument and a telephone upon separate circuits, a switch arranged to connect the main line with either of said circuits, a magnet in the signal instrument circuit, an operating lever for said instrument and a locking lever for said operating lever, said locking lever being operated by the magnet and arranged to be disengaged from the operating lever when the instrument circuit is connected with the main line and the battery, and engaged with said lever when the battery is cut out or the instrument circuit disconnected from the main line, substantially as described.

2. In a combined telephone and telegraph system, the combination with the central station, the main line, the battery for said line, and the switch at the central station for cutting out said battery, of sub-stations upon said line, each provided with a signal instrument and a magneto telephone and separate circuits, for said instrument and telephone, a switch for connecting the line with either the signal instrument or the telephone at pleasure, an operating lever for the signal instrument, a locking lever, I, adapted to engage and lock the operating lever, the said locking lever being operated in the direction to unlock by a magnet J, in the signal circuit, *j*, and in the opposite direction to unlock by a spring, *i*, when the battery is cut out from the line, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY M. SEITZINGER.

Witnesses:
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