

No. 684,274.

Patented Oct. 8, 1901.

F. E. LISTER.

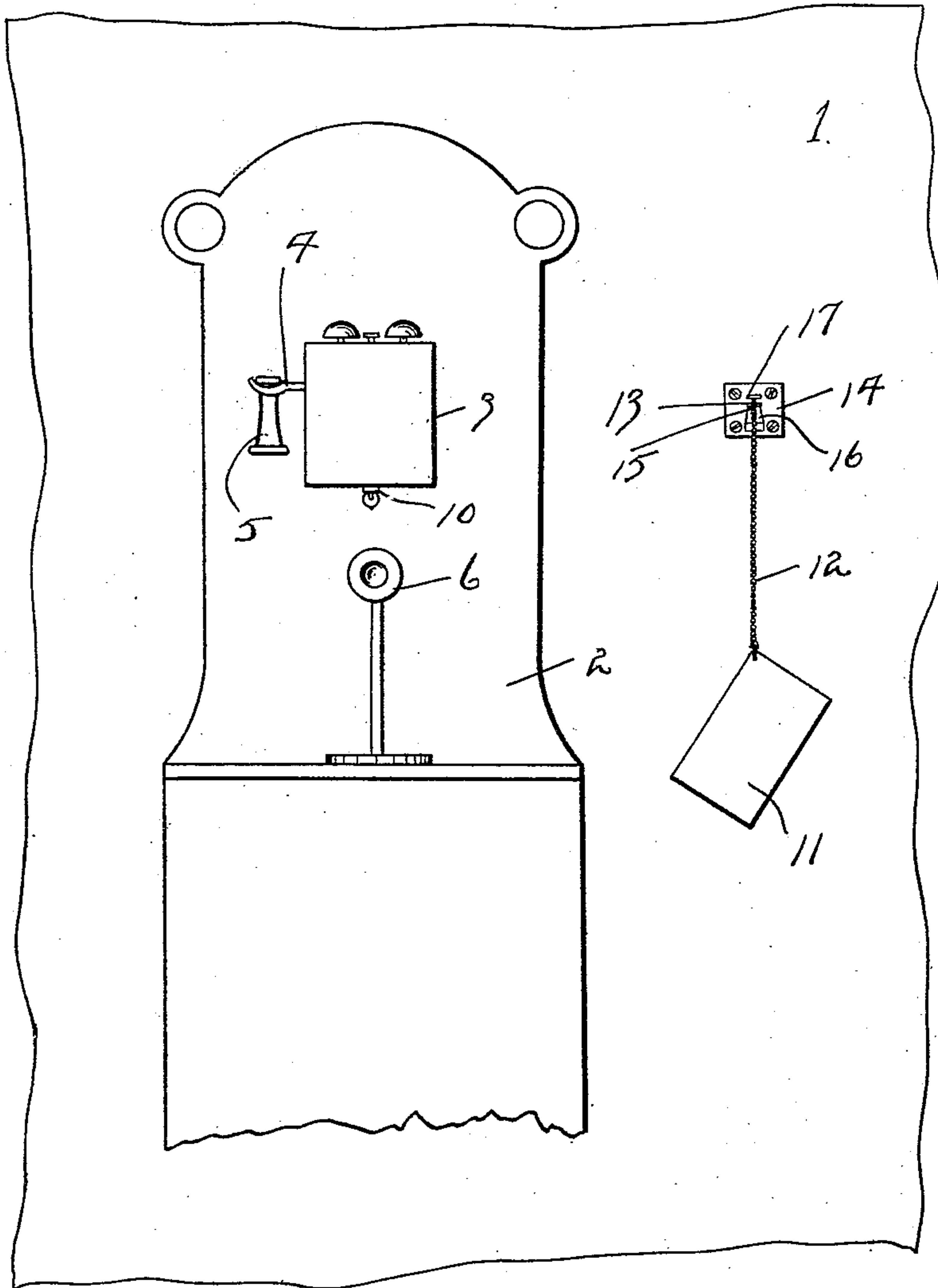
AUTOMATIC LIGHTING SYSTEM FOR TELEPHONE STATIONS.

(Application filed Jan. 14, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



Witnesses.

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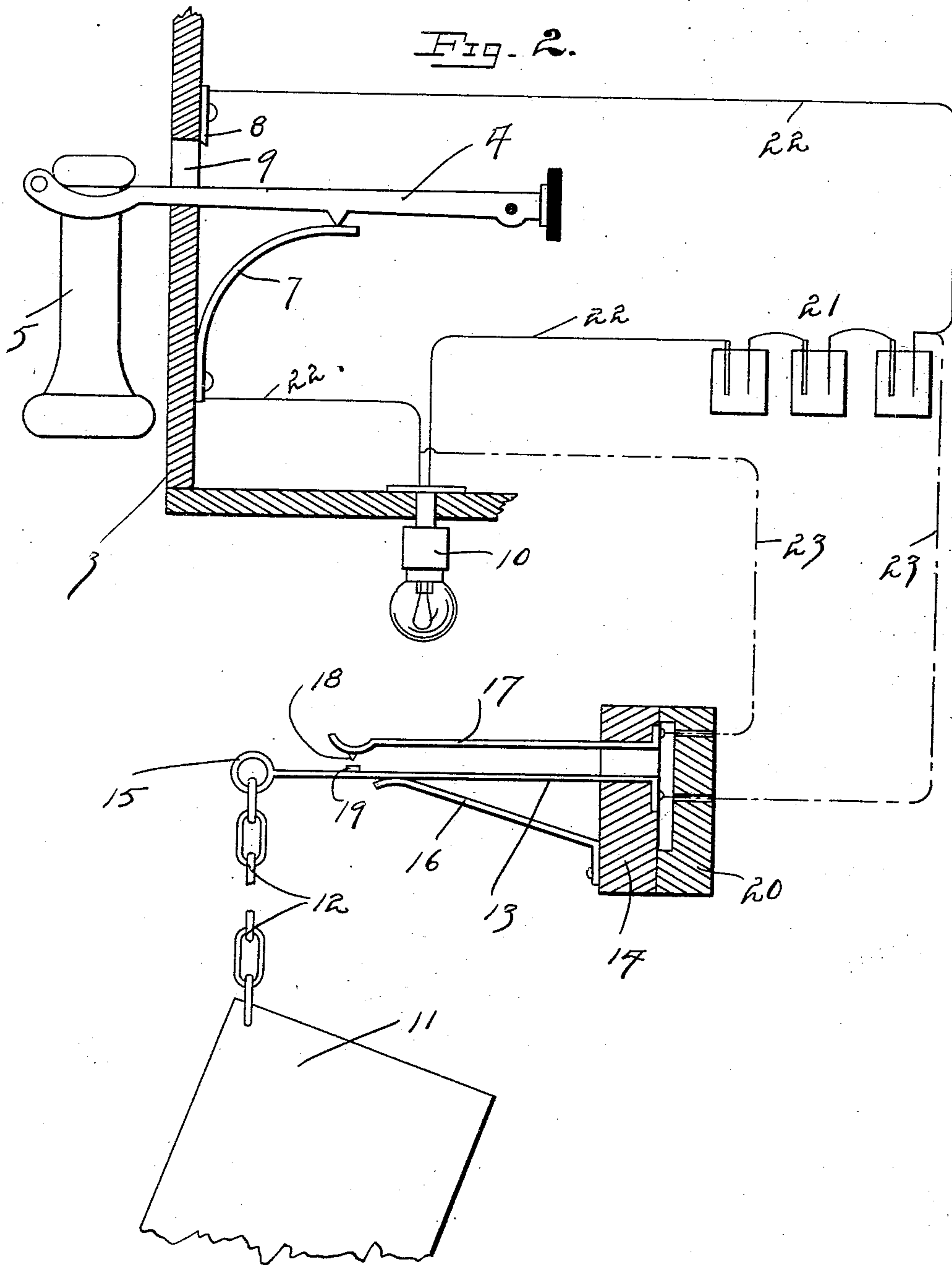
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# UNITED STATES PATENT OFFICE.

FREDERICK EDWARD LISTER, OF MINNEAPOLIS, MINNESOTA.

## AUTOMATIC LIGHTING SYSTEM FOR TELEPHONE-STATIONS.

SPECIFICATION forming part of Letters Patent No. 684,274, dated October 8, 1901.

Application filed January 14, 1901. Serial No. 43,256. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK EDWARD LISTER, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Automatic Lighting Systems for Telephone-Stations; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its special object to provide an improved light-controlling device for telephone pay-stations, whereby at a minimum cost of maintenance efficient light service may be afforded to the telephone patrons; and to these ends my invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

To accomplish the above ends without interference with the telephone service, it is necessary that the electric lamp which is employed to light the booth be normally cut out of circuit with the local battery or source of electrical energy, that this lamp be lighted in advance of the removal of the telephone-receiver from the receiver-switch, so as to furnish light by means of which the telephone-directory may be read and the call-number ascertained, and it is also very important that after the directory has been used the light from the lamp be continued while the person is using the telephone to call central, to deposit the coin, and to complete the conversation with the person called. All of these objects are attained in the preferred form of my invention, which is illustrated in the accompanying drawings, and wherein like characters indicate like parts throughout the several views.

Figure 1 is a view in elevation showing a portion of one side of a telephone pay-station, a portion of a telephone, and a telephone-directory suspended by means of a novel device for convenient use in connection with the telephone; and Fig. 2 is a view of the device, partly in diagram and partly in vertical section, with the parts arranged out of their actual relative positions, some parts of the device being removed and others broken away.

The numeral 1 indicates a portion of one side of a telephone-pay-station booth.

The numeral 2 indicates the upright back-board of the telephone.

Of the parts of the telephone it is only necessary for the purposes of this case to note the bell-box 3, the receiver-switch 4, the receiver 5, and the transmitter 6, all of which parts are of the ordinary construction and operate in the ordinary well-known manner. The switch-lever 4 when the receiver 5 is removed from the pronged free end thereof is, as is ordinary, yieldingly thrown upward to its limit by a metal spring 7. In this application of my invention the switch-lever 4 is forced into contact with a metallic contact-piece 8, suitably secured within the box 3, as shown, just above the slot 9. As shown, an incandescent electric lamp 10 is supported from the bottom of the box 3 in suitable position to light the booth or the immediate vicinity of the telephone.

The telephone-directory 11 is suspended by a chain 12 or other flexible connection within convenient reach of a person standing at the telephone. The means for suspending the directory 11 and chain 12 constitutes an important part in my present invention, and in its preferred form it comprises as follows:

The numeral 13 indicates a horizontally-projected arm, of spring metal, secured at its inner end to a block 14 and provided at its free end with an eye 15, to which the upper end of the chain 12 is attached.

The numeral 16 indicates a reinforcing-bracket, also secured to the block 14. This bracket or arm 16 prevents the spring-arm 13 from being bent too far downward by extreme strains. Above the spring-arm 13 is a horizontally-projected contact-arm 17, also secured to the block 14. At its free end the arm 17 has a contact-lug 18, which is adapted to engage with a contact-lug 19 on the said spring-arm 13. The block 14 is shown as secured to another block 20, which in turn is suitably secured to the side 1 of the booth. The strength of the spring-arm 13 is such that the weight of the book 11 will hold its contact-lug 19 out of engagement with the contact-lug 18 of the contact-arm 17. When, however, the directory 11 is picked up and held, the spring-arm 13 will under its own



spring action throw its lug 19 into engagement with the lug 18 of said arm 17.

The numeral 21 indicates a local battery located in a convenient place in the vicinity of the booth. This battery 21 is connected by lead-wires 22 with the contact-piece 8, above noted, with the lamp 10, and with the spring 7. Branch wires 23 from the wires 22 connect the opposite poles of the battery one with the spring-arm 13 and the other with the cooperating arm 17.

Operation: The operation of my improved lighting device under ordinary service will be as follows: The person wishing to use the telephone enters the booth, which at night is of course very dark and in many cases, even in the daytime, is not very light, and usually, not knowing the telephone-call of the person whom he may wish to reach, picks up the telephone book or directory 11. As already indicated, the very act of picking up the telephone-book closes the circuit from the battery 21 through the lamp 10, spring-arms 13 and 17, and connecting-wires, and thereby causes the lamp to throw out sufficient light to enable the telephone-book to be read. Of course when the telephone-book is dropped the light is for an instant extinguished. It will, however, be again lighted as soon as the telephone-receiver 5 is removed from the switch-lever 4 by the engagement of the said lever 4 with the contact-piece 8, which thereby closes the circuit from the battery 21 through the lamp 10, lead-wires 22, spring 7, and the said lever 4.

From the foregoing it is evident that the light is afforded only during such times as it is actually needed and that it is extinguished by the dropping of the telephone-book in the one instance and in the other by the replacing of the receiver 5 back onto the free end of the switch-lever 4, which final act also cuts the telephone out of service for the time being.

One extremely difficult action to attain and which is fully met in my present invention is the provision of an automatic device whereby the light may be turned on without any manipulation whatever of the telephone and in advance of the call to central, so as to enable the telephone book or directory to be read and the call-number desired to be ascertained. As is obvious, this problem is complete and satisfactorily solved in the device above described.

It will of course be understood that the device above described is capable of many modifications within the scope of my invention.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination with a telephone and an electric lamp in the vicinity thereof, of a source of electrical energy with circuit connections including said lamp, a yieldingly-closed circuit-breaker in said circuit, and a book or directory connected to said circuit-breaker, and serving, when suspended thereby, to break said circuit and throw said lamp out of action.

2. The combination with a telephone having a circuit-closing lever normally supporting the receiver, of a lamp in the vicinity of said telephone, a yieldingly-closed circuit-breaker, a source of electrical energy with circuit connections including said receiver-switch, and other circuit connections, including said circuit-breaker, both circuit connections including said lamp, and a book or directory connected to said circuit-breaker and serving, when suspended thereby to break the circuit, substantially as described.

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

FREDERICK EDWARD LISTER.

Witnesses:

MABEL M. MCGRORY,  
F. D. MERCHANT.