

C. W. HALLBERG.
TELEPHONE CONDUCTOR.
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1,247,672.

Patented Nov. 27, 1917.

Fig. 1.

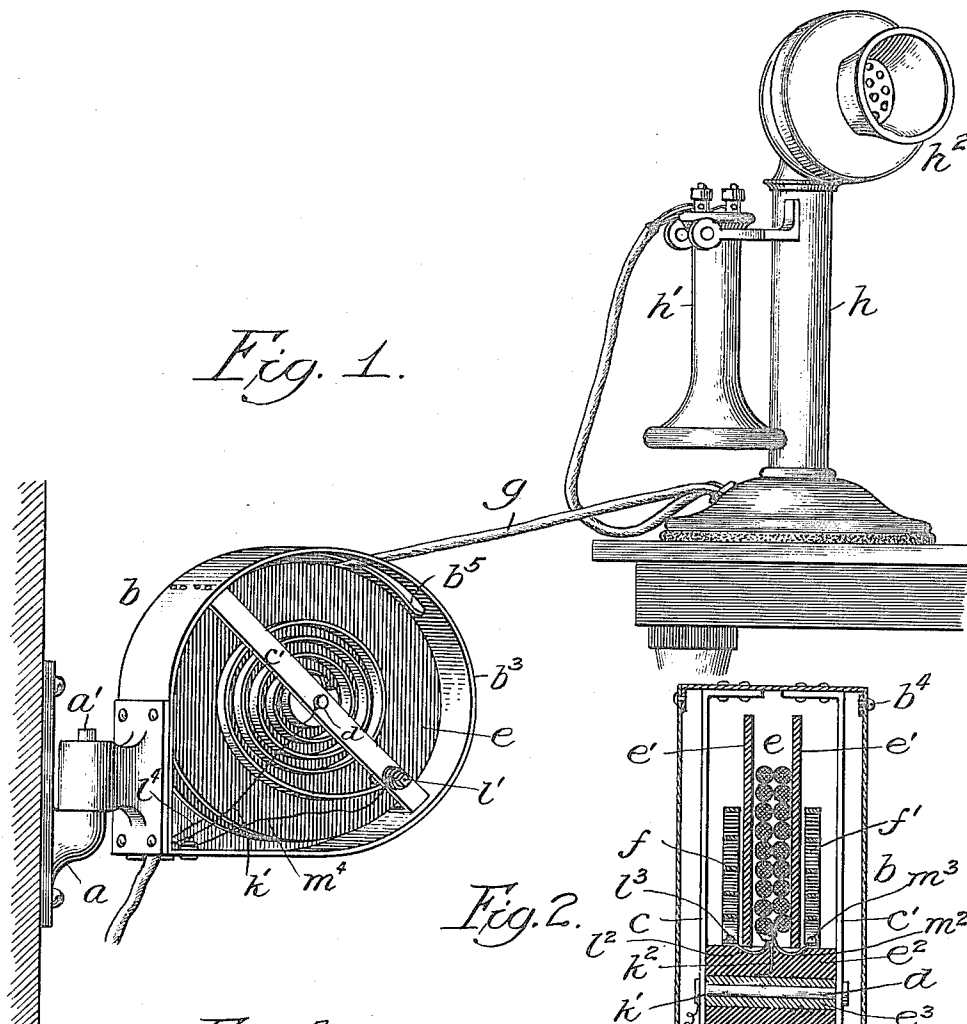


Fig. 2.

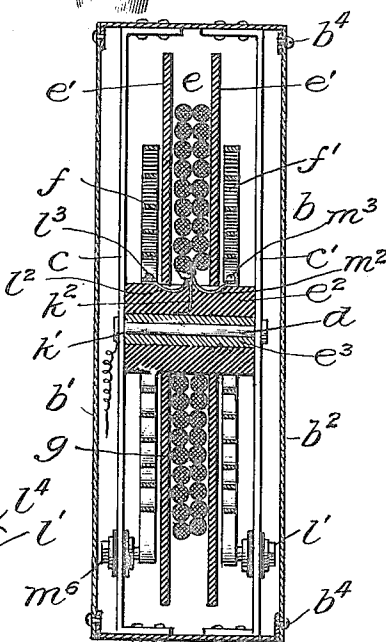


Fig. 4.

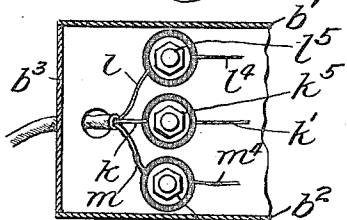
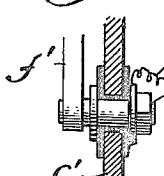


Fig. 3.



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UNITED STATES PATENT OFFICE.

CLAUS W. HALLBERG, OF CHICAGO, ILLINOIS.

TELEPHONE-CONDUCTOR.

1,247,672.

Specification of Letters Patent.

Patented Nov. 27, 1917.

Application filed March 29, 1913. Serial No. 757,517.

To all whom it may concern:

Be it known that I, CLAUS W. HALLBERG, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Telephone-Conductors, of which the following is a full, clear, and exact description.

The invention relates to telephone-conductors and more particularly to the conductors leading to a portable telephone set (transmitter and receiver).

It is now common practice to employ a portable set of instruments adapted to rest upon a desk or table and to use a flexible cord containing conductors between the portable set and the ringer or box which is usually fixed to a wall or the like. In order to permit the telephone-set to be moved around, as desired, it is necessary to have a reach of cord, usually from 6 to 8 feet. This loose cord is objectionable around a desk, because it interferes with the free use thereof. The primary object of the invention is to provide a device for automatically taking up the conductor-cord between the ringer-box and the telephone-set, so that it will never be in the way or interfere with the free use of the desk.

The invention further designs to provide an improved automatic take-up device for this cord, in which the electrical connections for the conductors to the telephone-set are made, so that there will be no short-circuits and in which moving contacts in the circuit for speech-transmission are avoided.

The invention consists in the several novel features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings, Figure 1 is a perspective of a device embodying the invention and showing the manner of its use, one side of the drum-case being removed. Fig. 2 is a vertical transverse section of the automatic take-up device. Fig. 3 is a detail showing the connection between one of the springs and one of the supporting-bars in the drum-case. Fig. 4 is a detail plan of the leading-in connection secured to the drum-case.

A bracket *a* is suitably secured to the ringer-box or wall adjacent the call-box, and has a pintle *a'* on which a drum-case *b* is pivotally sustained, the latter having a bracket fitting on said pintle, so that the automatic take-up device in said case will be free to swing laterally in any direction,

according to the point where the telephone-set is used. Case *b* comprises sides *b'* and *b''*, both of which are removably connected to the body *b³*, by screws *b⁴*. A pair of supporting-bars *c, c'* are rigidly secured to the drum-case in suitable manner, and a spindle or fixed shaft *d* is secured in said bars.

A drum *e* is rotatable upon said shaft and comprises sides *e'* of insulating material, a sleeve *e²* also of insulating material and a metallic conductor-sleeve *e³* fixed in sleeve *e²* and journaled upon the shaft *d*. Convolute springs *f* and *f'* at the outside of the drum-sides respectively, each have one end connected to one of the supporting-strips *c* in the drum-case, and the other to an insulating sleeve *e²*, and serve to automatically wind up the flexible-cord *g* containing the conductor-wires between the take-up device and the telephone-set. The cord *g* includes three electrical conductors which are connected in usual manner, to the telephone-set which comprises a stand *h*, a receiver *h'* and a transmitter *h²*, as usual in the art.

Usually three conductors are necessary in modern telephone-practice, two being used for a metallic circuit for speech-transmission and the third for a grounded signaling-circuit. The ground-conductor *k* leads into the case *b* and is secured to a post *k⁵* which is connected to the spindle or shaft *d* by a wire *k'*. A branch *k²* of said conductor is secured to the cord *g*, so that the grounded connection will be maintained through conductors *k, k'*, spindle *d*, sleeve *e³* and branch-conductor *k²*.

One of the conductors *l* of the metallic-circuit is extended into the case *b* and is electrically connected to a post *l⁵* which is connected to a spring *f'* by a wire *l⁴* which is connected to a post *l'* which is insulated from bar *c* and serves to connect the outer end of said spring to the case. The inner end of said spring is electrically connected to conductor *m²* which is included in the cord *g* and has its end secured to spring *c* by a screw *m³*. Conductor *m²* is connected to the telephone-set through cord *g* in usual manner. The other conductor *m* of the metallic circuit is connected to a post *m⁵* on the case, which is connected to the other spring *f* by a conductor *m⁴* which is connected to a post *m⁶* to which spring *f* is secured. Spring *f* also serves as an electrical conductor. The inner end of said spring is connected to branch-conductor *l²* by a

screw 7³ and said branch is included in the cord *g*, and is electrically connected to the telephone-set in usual manner.

In operation, the springs will serve to automatically keep the conductor-cord *g* taut and by reason of utilizing the springs as conductors, the electrical connections, particularly those for speech-transmission, will be effectively maintained.

10 The invention thus exemplifies an automatic take-up device for the conductor-cord of a portable telephone-set which permits the entire set to be moved around as desired. When not in use, the cord will be kept taut and will be automatically taken up by the device, so that there will never be any loose conductor-cord between the telephone-set and the wall-connection or ringer-box. The drum-case being pivotally connected to the bracket, permits the device to move so the plane of rotation will be parallel to or in the direction of the pull upon the cord and will avoid wearing the cord where it passes through slot 7⁵ in the case. The springs employed to operate the take-up drum are utilized as conductors, so there will be no moving contacts in the circuit for speech-transmission, in the automatic take-up device. The device is simple in construction and may be readily installed.

The invention is not to be understood as restricted to the details set forth, since these

may be modified within the scope of the appended claims without departing from the spirit and scope of the invention.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is:

1. The combination with a portable telephone-set, of a support, a drum on said support, three flexible cord conductors between the telephone-set and the drum, springs in the support for operating the drum and electrically connected to two of said conductors, respectively, three leading-in conductors, two of which are connected to the springs respectively and an electrical connection between the third cord-conductor and the third leading-in conductor.

2. The combination with a portable telephone-set, of a pivotally sustained support, a drum in said support, three flexible conductors between the telephone-set and the drum springs in the support for operating the drum and electrically connected to two of said conductors respectively, three leading-in conductors two of which are connected to said springs respectively, and an electrical connection between the third cord conductor and the third leading-conductor.

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Witnesses:

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