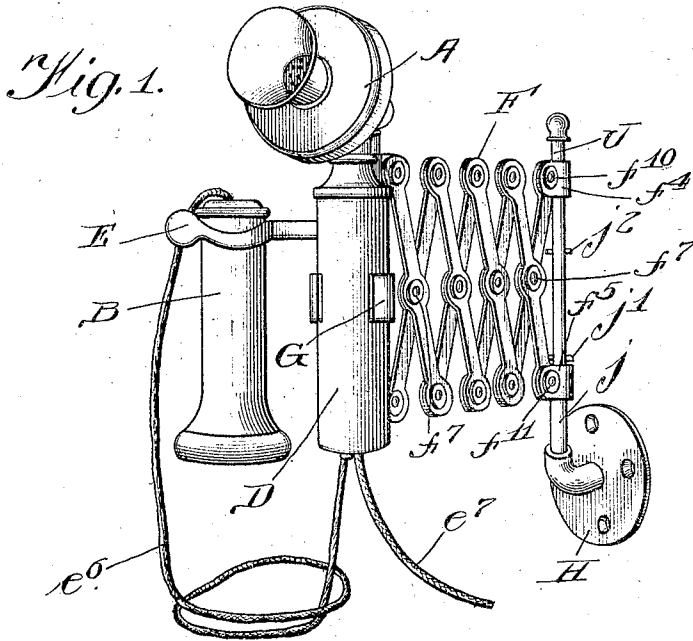
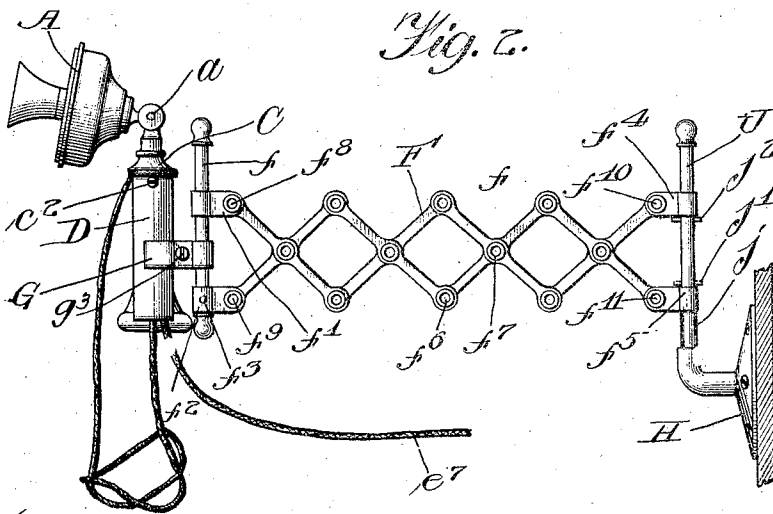


P. C. BURNS.
 TELEPHONE DESK SET.
 APPLICATION FILED MAR. 9, 1905.

1,011,405.

Patented Dec. 12, 1911.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

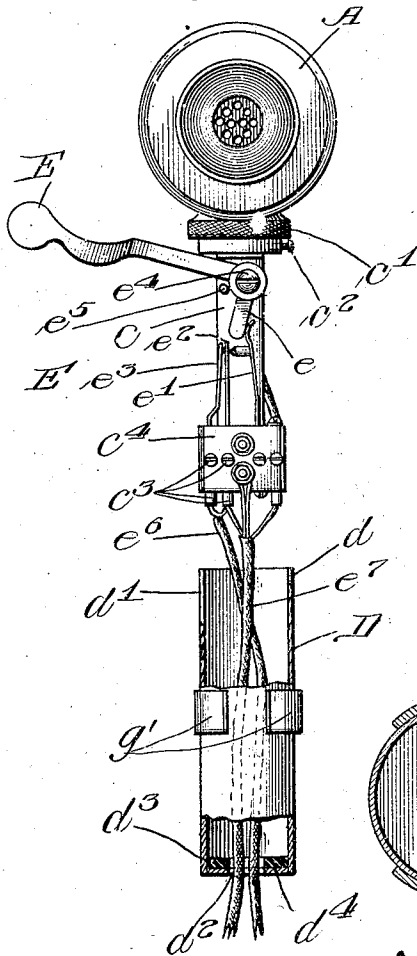


Fig. 4.

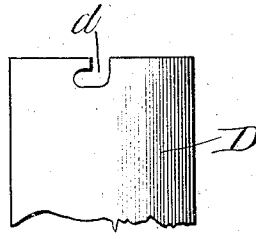


Fig. 5.

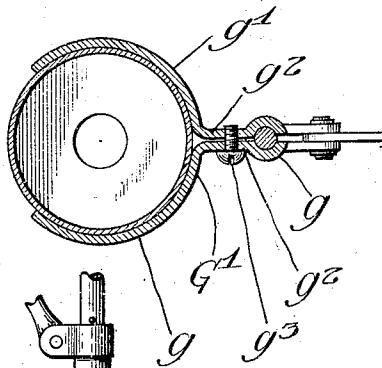


Fig. 6.



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UNITED STATES PATENT OFFICE.

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TELEPHONE DESK SET.

1,011,405.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed March 9, 1905. Serial No. 249,219.

To all whom it may concern:

Be it known that I, PETER C. BURNS, a citizen of the United States of America, and resident of Chicago, Cook county, Illinois, have invented a certain new and useful Improvement in Telephone Desk Sets, of which the following is a specification.

A subscriber's telephone set includes a transmitter and a receiver supported in suitable manner. My invention relates to such a telephone set, and more particularly to the supporting means for mounting the transmitter and receiver in position for convenient use.

Generally stated, the object of my invention is the provision of an improved, simplified and highly efficient structure for supporting the transmitter and receiver of a telephone set adapted more particularly for use at subscribers' stations.

A special object is the provision of an improved construction and arrangement for permitting the telephone set to be swung about readily from one position to another, and to be adjusted toward and away from the desk, table, wall or other structure upon which it is mounted, and whereby, in connection with such ready adjustment of the telephone set, the transmitter and the hook-switch, together with the mounting and binding-post connections therefor, may be removed as a unit from a tubular or hollow standard upon and in which the same are mounted, and which tubular or hollow standard is in turn readily removable from the end of the extensible and horizontally swinging supporting arm by which the telephone set is carried and held in position for convenient use.

It is also an object, of course, to provide certain details and features of construction, together with certain features of improvement, tending to increase the general efficiency and serviceability of a telephone set of this particular character.

To the foregoing and other useful ends, my invention consists in matters hereinafter set forth and claimed.

In the accompanying drawings Figure 1 is a perspective of a telephone set and swinging support thereon embodying the principles of my invention. Fig. 2 is a side elevation of the telephone set and support shown in Fig. 1, but showing the extensible swinging arm extended or lengthened to the

full limit of its endwise or longitudinal extension or adjustment. Fig. 3 is an enlarged detail view illustrating the manner in which the transmitter, hook-switch and the mounting for the same are removable as a unit from the tubular or hollow standard upon and in which the same are supported. Fig. 4 is an enlarged detail view showing the notch at the upper end of the tubular support, for locking the transmitter and its mounting, and other parts carried thereby, in position at the upper end of the said tubular or hollow standard. Fig. 5 is an enlarged horizontal section through the said tubular or hollow standard showing the clamping device for securing the same to the outer end of the swinging arm of the structure by which the telephone set is carried. Fig. 6 shows one form of bracket-plate or support upon which said swinging and endwise extensible arm can be mounted.

As thus illustrated, the transmitter A and the receiver B can be of any suitable known or approved construction. Preferably, the said transmitter is provided with a joint or pivotal connection *a* by which it is swingingly connected to the upper end or head of the mounting C. It will be observed that the lower portion *c* of said mounting is preferably like a bar or plate in shape, and extends downwardly within the tubular or hollow standard or inclosure D. The head *c'* of the mounting is adapted to partially fit within the open upper end of the said tubular or hollow standard D, and is provided with a laterally projecting screw *c''* adapted to engage a notch or recess *d* in the upper end of the said tubular supporting and inclosing member; and in this way, the said mounting and its tubular standard or inclosure are held together by means of a bayonet-joint consisting of the said screw and the notch *d*. Upon the inclosed portion *c* of the said mounting C, suitable binding-post connections *c''* are provided, of any suitable character, and according to the arrangement of the circuits for the telephone set. A switch-hook E is also carried by the said inclosed portion of the mounting, and is provided, preferably, with an arm *e* adapted to operate the switch-springs *e'*, *e''* and *e'''*; and it will be understood, of course, that the said switch-hook is pivoted at *e'*, and has its downward movement limited by a stop *e''*. As illustrated, the said switch-hook, when

the various parts of the set are assembled together, projects through a slot d^1 in the upper end-portion of the tubular support or inclosing member D. In the arrangement shown, the flexible cord e^6 connects the receiver B with the proper binding-posts or other terminals on the lower end of the mounting or block of insulation c^4 at the lower end of the mounting. The cord e^7 is also provided with suitable connection with the said binding-posts or terminals, and can lead to the binding-posts or terminals of an induction coil, or other devices, in the usual manner; the said hook-switch being employed, of course, for opening and closing the circuit of the transmitter, and, if used in a common battery system, for opening and closing the subscriber's line circuit. The said cords e^6 and e^7 enter the tubular support or inclosure D through an opening d^2 in its lower end, said opening being preferably less in diameter than the internal diameter of the tubular support or inclosure, and a ring or washer d^3 of insulation being preferably interposed between the lower end of the mounting C and the ledge or flange d^4 formed by drawing inward the metal at the lower end of the tube. In this way the tubular supporting or inclosing member D presents a neat and symmetrical appearance, being adapted to support and inclose the mounting and switch-springs and circuit terminals, and provided at its smooth and shapely lower end with an opening only large enough to admit the two flexible cords, as shown and described. The transmitter and hook-switch thus constructed and organized into a compact and unitary structure—including the receiver—are all readily removable as a unit from the outer or distal end of the horizontally swinging and endwise extensible arm or supporting member F; and, as will be observed, the transmitter, hook-switch, circuit terminals and the mounting for the same, are all readily removable as a unit from the tubular support or inclosing member D. The said swinging and endwise extensible arm F consists preferably of a lazy-tongs device, as shown, provided at its outer end with a vertical member or standard f adapted to serve also as a guide for the upper end portion f^1 of the said lazy-tongs device. The lower end-portion f^2 can be secured to said vertical member or guide by means of a pin or rivet f^3 . A clip or clamping device G is employed for securing the tubular or hollow supporting and guiding member f . As shown more clearly in Fig. 5, the said clip or clamping device G consists preferably of two pieces of flat strap metal bent in such manner as to provide a split collar g and a pair of clamping jaws g^1 ; and between the said split collar and the clamping jaws there

are neck portions g^2 adapted to be drawn together or separated, more or less, by means of a clamping screw g^3 . It will be seen that the jaws g are adapted to clamp upon the rod-like member f , while the clamping jaws g^1 are adapted to embrace and grip the cylindrical and hollow supporting or inclosing member D, the tightening of the screw g^3 serving to produce the requisite grip or clamping action at both points or places. At its other end, the said lazy-tongs is supported upon a stationary support or bracket-plate H adapted to be secured to a wall or other vertical surface; or, if desired, the base or bracket-plate I, as shown in Fig. 6, may be adapted to rest upon or be secured to the top of a desk or table, or to any horizontal surface. In either case, however, the said base or bracket-plate is preferably provided with a rod-like standard J upon which the upper and lower end-portions f^4 and f^5 are mounted to turn or rotate. The lower portion f^5 rests upon a shoulder j and is held against upward movement by a pin j^1 inserted through the rod-like standard J. Another pin, j^2 inserted through the said rod-like standard J, acts as a stop to limit the downward sliding motion of the lazy-tongs portion f^4 , it being observed that this portion f^4 is adapted to slide up and down upon the rod-like standard J. The pin j^2 can, of course, be positioned at any desired point, so as to permit the lazy-tongs F to either straighten out entirely, and thus reach the maximum of their endwise extensibility or adjustment, or to only partially thus extend, as shown in Fig. 2. As shown in Fig. 1, however, the arrangement is preferably such that the said lazy-tongs device is capable of collapsing or contracting to the full limit of its movement or action in this direction, so as to permit the telephone set to be pushed back as nearly as possible to the standard J when the instruments are not being used. When the instruments are to be used, the lazy-tongs can be pulled out in any desired direction, thus facilitating the use of the telephone instruments; and when the user is through telephoning, the entire set can then be pushed back toward the standard J and swung around to any point where the set as a whole will be completely out of the way and not liable to interfere with other matters or with the user's convenience in general.

In the arrangement shown, and involving the rod-like standards at each end of the lazy-tongs, to which the lower end-portions of the same are secured, while the upper end-portions thereof are free to slide up and down upon the upper portions of such rod-like standards, so that the latter serve as both supports and guides, a very strong and rigid, entirely satisfactory and most serviceable supporting arrangement is pro-

vided for the telephone set. As shown, the arms or members of the lazy-tongs are pivotally connected at their ends by means of rivets f^6 , and at other sections by means of rivets f^7 , and the end arms or members of the lazy-tongs are connected with the end-pieces f^1 , f^2 and f^4 , f^5 by means of rivets f^8 , f^9 and f^{10} , f^{11} ; and it is preferable to interpose washers, of any suitable character, between the members of the lazy-tongs where they cross each other and where they are pivotally connected at their ends. Smaller washers, as shown, may be applied to the outer ends of all rivets, so that these rivets may have their outer ends upset or riveted over upon the washers, rather than directly upon the members of the lazy-tongs and other parts.

The lazy-tongs can be readily detached from the telephone set by loosening the screw g^3 , and also from the standard or supporting member at the other end, by simply pushing out the pins f^3 and f^1 , f^2 . The knobs on the ends of the rods f and J can be removed, and the tongs can be disconnected from the rod f by pushing out the pin f^3 . In fact, all the different parts are readily assembled and taken apart, and any of the parts can be easily removed and replaced in case it becomes desirable to make repairs or substitute new parts for those impaired by usage or accident. As a further advantage, it will be seen that the clamping device G can be clamped at any desired position in its range of horizontal swinging adjustment upon the rod-like standard f ,—that is to say, the telephone instruments can be adjusted about a vertical axis located between the instruments and the outer end of the swinging and endwise extensible arm or lazy-tongs F , so that the most convenient position can always be found for using the telephone instruments.

The transmitter, receiver, hook-switch and the inclosing means of the latter are easily and readily removable as a unit from the end of the swinging or adjustable arm. Furthermore, these elements are also readily adjustable as a unit in a vertical direction, relatively to the end of the adjustable arm, the telephone set being thereby adapted for both sidewise and up and down adjustment. Again, the desk set can be removed from the end of the adjustable arm, without in any way dismembering or disturbing the continuity of the lazy-tongs device or the adjustable arm, thereby permitting considerable variation in the construc-

tion or character of the telephone set carried at the end of the arm.

It will be seen that the rivets f^6 never fall below the lower end of the tube D , so that nothing ever projects downwardly in a manner to interfere with the back and forward movements of the lazy-tongs. As the cords enter freely at the lower end of said tube, they are not liable to become entangled, inasmuch as the tube is not engaged or supported at its lower end, but rather at a point between its upper and lower ends, thus leaving the lower end of said tube free from mechanical connections. The bottom portions of the lazy-tongs are fixed to the rods f and J , but the upper portions of the said lazy-tongs have a sliding engagement with said rods, whereby the bottom of the entire telephone and supporting structure always remains at the same level.

What I claim as my invention is:

1. In a telephone support, an upright tube upon the upper end of which the telephone instruments are carried, an upright cylindrical member at one side of said tube, and a clamp consisting of a pair of jaws formed at one end to grip the tube and at the other end to grip the said member, and a screw extending through the two jaws at a point between the opposite ends thereof, said tube and member being unconnected except by said clamp.

2. In a telephone support, an upright tube upon the upper end of which the telephone instruments are carried, an upright rod adjacent said tube, a lazy-tongs having a fixed engagement and a sliding engagement with said rod, and a clamp gripping the tube and engaging the said rod at a point between said fixed and sliding portions of the said lazy-tongs, said tube and rod being unconnected except by said clamp.

3. In a telephone desk set, the combination of a tubular support, telephone instruments carried at the upper end of said tubular support, cord connections entering the lower end of said support, a clamp for gripping the tubular support laterally, and means comprising crossed and pivoted arms for movably supporting said clamp, the said support being adjustable in said clamp.

Signed by me at Chicago Cook county, Illinois this 27th day of February 1905.

PETER C. BURNS.

Witnesses:

MAX W. ZABEL,
F. B. BRICE.