



# UNITED STATES PATENT OFFICE.

BURTON W. SWEET, OF CLEVELAND, OHIO, ASSIGNOR TO HARRY Z. SANDS, OF CLEVELAND, OHIO.

## TELEPHONE SWITCH-HOOK.

958,979.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, BURTON W. SWEET, a citizen of the United States of America, and a resident of Cleveland, in the county  
5 of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Telephone Switch-Hooks, of which the following is a specification, reference being had as well to the accompanying drawings, forming a part thereof.  
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My invention relates to improvements in telephone hook switches, and has for its object the construction of an appliance of this class, whereby the supporting switch hook  
15 for the receiver may be removably but securely mounted in place upon the telephone instrument.

My present application comprises a division of an earlier one filed by me April  
20 1st, 1907, Serial No. 365,698, wherein I have described and claimed a novel form of telephone desk set, to which my switch hook is particularly applicable.

By reason of the necessity for frequent  
25 inspection, and also for the purpose of safely shipping the same, telephone apparatus preferably is provided with a switch hook of the removable type, and practical requirements demand that this shall be  
30 cheap to manufacture, and secure when mounted in place within the instrument. The switch hook of my invention conforms to these requirements, and will now be described in connection with the telephone  
35 desk set, with which I originally designed the same, although it will be obvious that its use is not limited thereto.

Referring to the accompanying drawings illustrating an embodiment of my invention—Figure I is a vertical section of the improved desk set, equipped with the novel  
40 form of switch hook in question. Fig. II is a view of certain details thereof in side elevation and partially broken away. Fig. III is a transverse section on line III—III, Fig. I. Fig. IV is a fragmentary view illustrating the inner end of the switch hook  
45 and connections within the containing box or case; and Fig. V illustrates the switch hook removed from its associated parts.  
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Throughout the several figures of the drawings, I have employed the same characters of reference to indicate similar parts.

Referring first to Fig. II, it will be seen

that the transmitter head, the upper section  
55 of the casing and its retaining ring, have been removed from their attachment upon the central supporting plate, thus exposing the removable switch-hook, which is shown properly assembled in the vertical sectional  
60 view which I shall now describe in detail.

The central supporting plate *a*, has outwardly bent lugs *a'* which are firmly riveted within the cup *c* and dished portion *d'* of the stamped metal base *b*. Through the  
65 two eyelets *e'* *e''*, which may be formed of metal or insulating material, extends the conducting cord *f* whose individual conductors are connected with the switch  
70 springs *g*, insulatively mounted upon the lower portion of the supporting plate *a*.

A stiff clock-spring *h* bears upon the longer or actuated spring of the said contact springs, which is looped over an insulating sleeve upon the depending arm *i'*  
75 of the pivoted bell-crank member of the hook switch. A housing *i''* secured near the upper end of the supporting plate, pivotally mounts this bell-crank member, which is adapted to accommodate the receiver-support  
80 port or hook *i*.

The inner end of the hook or support is slotted and shouldered respectively to engage the cross pins *i''* *i'''*, while a pin *i''* passes within the slot within said pivoted  
85 bell-crank member *i'*, and is normally held by means of the lateral spring *i''*, which snaps over the head of said pin (see Fig. II). Merely by releasing the spring, however, the receiver-support or hook *i* is readily re-  
90 moved from the upper bell-crank arm, and permits the lower section *j* of the casing to be lifted from its protecting position about the switch springs.

When a switch hook of this type is used  
95 in connection with a switch mounted within the ordinary wood box or casing *k*, as indicated in Fig. IV, it is perfectly obvious that said hook or support may be detached merely by actuating the spring *i''* out of en-  
100 gagement with the pin *i''*, so that the apparatus is better adapted for shipment or storage, and the contained switch hook parts and switch apparatus are not liable to be damaged as frequently occurs when the pro-  
105 truding hook is rigidly mounted.

From the foregoing, it will be seen that the switch hook of my invention is positive

in its action, relatively inexpensive and simple and practical in construction and operation. The features thereof I desire to secure for myself by Letters Patent, substantially as recited in the following claims:—

5 1. In a telephone switch hook apparatus, the combination with a pivoted bell-crank member, of a set of switch springs connected to be actuated by a depending portion thereof, a removable supporting member fitting  
10 said bell-crank lever, an extended pin or stud thereon, and a spring adapted to engage the latter and removably secure the supporting member in place, substantially as set  
15 forth.

2. In apparatus of the class described, the combination with a pivoted actuating part, of switch springs connected to be moved into and out of electrical engagement thereby, a  
20 removable supporting member detachably fitting said actuating part, and a resilient or spring actuated detent adapted removably to hold the parts normally in operative relation, substantially as set forth.

25 3. In a telephone switch hook appliance, the combination with a set of switch springs, of an actuating member pivotally mounted adjacent to said springs, a removable receiver support, engaging parts for mechan-  
30 ically connecting the two latter elements, a springlike latch or detent for normally securing said elements against separation, substantially as set forth.

35 4. In a telephone switch hook appliance, the combination with a forwardly slotted actuating member, of a set of switch springs controlled thereby, a transverse pin pivotally mounting said member, a telephone receiver support rearwardly slotted to engage said

pin, a transverse pin thereon adapted to  
40 engage the slotted portion of the actuating member, and a spring latch normally engaging said pin for maintaining the parts in operative relation, substantially as set forth.

45 5. In a telephone hook switch for desk sets, the combination with a central mounting plate, of a housing rearwardly secured thereto, an actuating bell-crank member rearwardly pivoted in said housing, a set of  
50 switch springs positioned beneath and connected to be actuated by said member, a removable receiver support fitting the upper arm of the bell crank member, and a spring-actuated latch for securing the support and member together, substantially as set forth.

55 6. In apparatus of the class described, the combination with a set of switch springs, of a bell-crank member pivoted above and adapted to actuate the same into and out of electrical engagement; the same comprising  
60 a depending insulated part and a forwardly slotted upper arm, a rearwardly slotted receiver support fitting said upper arm, a pivot pin mounting said bell-crank member and engaged rearwardly by the slotted support,  
65 a stud upon said support fitting the slotted portion of the bell-crank arm, and a spring normally engaging said stud to retain the support in place, substantially as set forth.

70 In testimony whereof, I have hereunto signed my name at Cleveland, Ohio, this 4th day of August, A. D. 1909, in the presence of two subscribing witnesses.

BURTON W. SWEET.

Witnesses:

ALBERT LYNN LAWRENCE,  
V. G. ARMSTRONG.