(No Model.)

T. A. WATSON.

TELEPHONE SWITCH.

No. 265,897. Patented Oct. 10, 1882.

Fig: 1.

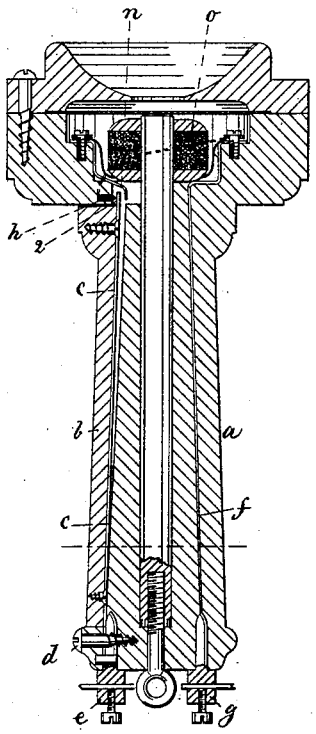
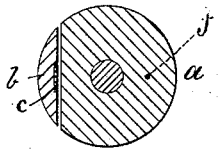


Fig: 2.



Witnesses.
Jos. P. Livermore
L. F. Connor.

Inventor
Thomas A. Watson
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UNITED STATES PATENT OFFICE.

THOMAS A. WATSON, OF EVERETT, ASSIGNOR TO THE AMERICAN BELL TELEPHONE COMPANY, OF BOSTON, MASSACHUSETTS.

TELEPHONE-SWITCH.

SPECIFICATION forming part of Letters Patent No. 265,897, dated October 10, 1882.

Application filed April 12, 1880. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. WATSON, of Everett, county of Middlesex, State of Massachusetts, have invented an Improvement in Telephone-Switches, of which the following description, in connection with the accompanying drawings, is a specification.

My invention relates to telephones; and it consists in applying to a telephone adapted to be held in the hand while in use an electric switch or circuit-changer to be operated by the hand in grasping the telephone while in use.

Switches have heretofore been automatically operated by the weight of the telephone to change the circuit from the telephone to the signal apparatus when the former is not in use, or to make any other change in the circuit which is needed to be made when the telephone is to be used or hung up out of use.

As herein shown, the outer casing or handle of a Bell telephone of usual construction is split longitudinally and provided with a spring contact-piece, which is connected with one of the circuit-wire-binding screws of the telephone, the said spring being attached at one end to the handle, and for nearly its entire length to the piece split off from the said handle, allowing the latter to have a slight oscillating movement to and from the main portion of the handle. When the telephone is not in use the spring moves outward from the handle and forms a contact with a suitable contact-point, thus closing a circuit to any desired point; but when the telephone is taken in the hand for use the split-off portion of the handle is pressed by the grasp toward the main portion, the spring then yielding and being moved away from the contact-point last described against another contact-point, thus breaking the first circuit and closing another. As herein shown the first-mentioned contact-point is in connection with a wire joining the other circuit-wire of the telephone before it reaches the induction-coil thereof, the said coil consequently being shunted thereby when the telephone is not in use. It is obvious that the said shunt-wire may be extended outside the telephone and pass through the signal mechanism, thereby placing it in circuit when the telephone is not in use. In both cases the other contact-point is in connection with one terminal of the induction-coil of the telephone, which is thus placed in circuit when the handle thereof is grasped.

Figure 1 is a longitudinal section of a telephone embodying my invention; Fig. 2, a cross-section thereof.

The handle portion *a* of the telephone-inclosing case is split longitudinally, a switch-piece, *b*, being separated from the rest or main portion thereof. A strong spring, *c*, connected with the switch-piece *b*, is attached at its lower end, which extends beyond the said switch-piece, to the main portion of the telephone, as herein shown, by the screw *d*, such connection permitting the spring and connected piece *b* to vibrate to and from the rest of the handle, the tendency of the said spring being to press outward therefrom. The lower end of the spring is in electrical connection with the binding-screw *e*, the said spring replacing the usual circuit-wire corresponding to the one *f*, connected with the screw *g*. The upper end, 2, of the spring *c*, projecting slightly beyond the end of the switch-piece *b*, rests in contact with the point *h*, being pressed against the same by the elasticity of the said spring when the telephone is not in use. When the telephone is taken up the pressure of the hand or fingers brings the end *h* of the spring against the contact-piece *n*, in connection with one end of the coil *o*, the other end of which is connected with the wire *f*, thus closing the circuit from the screw *e* to the one *g* through the telephone-coil, or placing the telephone in circuit. The point *h* is shown as connected with the wire *f*, thus shunting the coil *o* when the telephone is not in use.

It is obvious that the switch may be used to connect the signal apparatus in circuit when the telephone is not in use, and the reverse. This may be conveniently done by letting the wire connected with the point *h* pass down through the handle *a* to a third binding-screw, to be connected with the signal apparatus, and then to ground. In this case the line-wire should be connected with the screw *e*, and the screw *g* with the ground.

It is obvious that a spring or other suitable circuit-changer might be placed on the outside

of the telephone-handle, to be operated in taking the same up for use, without splitting the handle, as described.

It is also obvious that the switch may be used in connection with the flexible sound-conducting tubes shown in another application for a patent to be filed by me.

I claim—

1. The combination, in a telephone, of the split handle, spring, contact-piece attached to the split-off portion, and two contact-points between which the end of said contact-piece plays, substantially as described, said piece and said points being connected with the telephone-wires, as set forth.

2. In a hand-telephone, a spring circuit-controller to be automatically operated to change an electric circuit by the pressure of the hand in taking and holding the telephone in use, and adapted to return to its original position as soon as the pressure of the hand is removed, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS A. WATSON.

Witnesses:
JOS. P. LIVERMORE,
N. E. C. WHITNEY.