T. A. WATSON.

Hinge for Telephone Boxes or Cases.

No. 221,434. Patented Nov. 11, 1879.

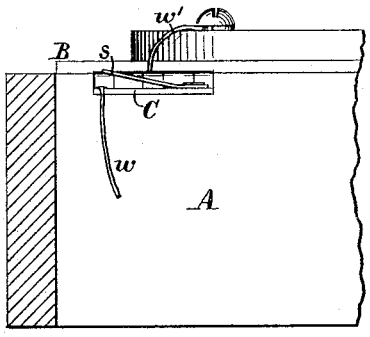

Fig. 2.

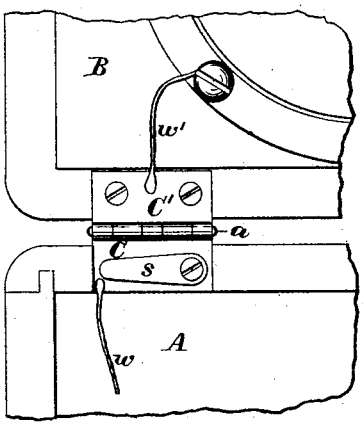

Fig. 1.

Witnesses:

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THOMAS A. WATSON, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN HINGES FOR TELEPHONE BOXES OR CASES.

Specification forming part of Letters Patent No. **221,434**, dated November 11, 1879; application filed May 21, 1879.

To all whom it may concern:

Be it known that I, THOMAS A. WATSON, of Boston, in the State of Massachusetts, have invented an Improvement in Hinges for the Boxes or Cases of Telephones and Electric Apparatus, of which the following is a specification.

In several forms of telephone now in use a part of the apparatus is secured to the cover of a wooden box, while another part is placed within and secured to the box itself, and use is made of the metallic hinges of the cover to bring the two portions of the apparatus within the same electric circuit; but it is found that ordinary box or chest hinges cannot always be trusted to complete an electric circuit, since it often happens that the connecting bolt or pin fits too loosely within the tube of the hinge, and that the projecting parts of the two leaves of which the tube is formed do not interlock with sufficient exactness.

The object of this invention is to remedy this difficulty; and this I have done by attaching a spring to one leaf of each hinge, which, when the box is closed, will press constantly against the other leaf.

In the drawings, Figure 1 is a plan, and Fig. 2 a sectional elevation of so much of a box with its cover or lid as is necessary to illustrate my invention, the lid being open and the box being supposed to rest on its bottom.

A is a portion of the box; B, a portion of the cover. There are two hinges, but only one is shown, its leaves being marked C and C′, while the connecting bolt or pin is marked *a*. The spring, which I have added to each hinge for the purpose stated above, is marked *s*. One end of it is screwed, as shown, to the leaf C, which is screwed to the box. The other end of the spring is shown as free; but it is apparent that when the box is closed, in order that the telephonic or the electric apparatus may be used, this free end of the spring will press constantly against the leaf of the hinge which belongs to the cover.

Connection is made between the leaf C of each hinge and the apparatus in the box by wires *w*, and between the apparatus belonging to the cover and the leaf C′ of each hinge by wires *w′*.

I have applied my invention to a casing for a speaking-telephone invented by Francis Blake, Jr., attaching the diaphragm and spring-electrodes to a frame in or on the lid, and placing within the box the induction-coil and the screw-cups, both those connected with the line-wires and those connected with the local battery; but it is obvious that the invention is applicable to other forms of telephones and electric apparatus—for example, to an instrument comprising a call-bell and a magneto-machine, in which the magneto-machine is best placed within the box proper, while the bell-magnet and bell are attached to the lid.

I am aware that in electric fire-alarms springs have been attached to doors and their casings in such manner that when the door is opened the spring upon the door comes in contact with the spring upon the casing, and establishes a circuit and sounds an alarm, as set forth, for instance, in the patent to Fontaine, August 7, 1869, No. 93,861; but in such apparatus the hinges have formed no part of the circuit. In my contrivance the hinges are constantly in the circuit, whether the lid is open or closed, and the spring is merely auxiliary to them when the lid is closed.

I claim—

A metallic spring attached to one of the leaves of the lid-hinge of a box, and arranged to strike against the other leaf when the box is closed, the box containing telephonic or other electric apparatus, in part attached to the lid, and in part attached to the body of the box, and electric connection between the two parts of the apparatus being made by the hinges, substantially as described, for the purpose specified.

THOMAS A. WATSON.

Witnesses:

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