(No Model.) 2 Sheets—Sheet 1.

C. BALLOCH.

TELEPHONE CABINET.

No. 359,492. Patented Mar. 15, 1887.

Fig. 1

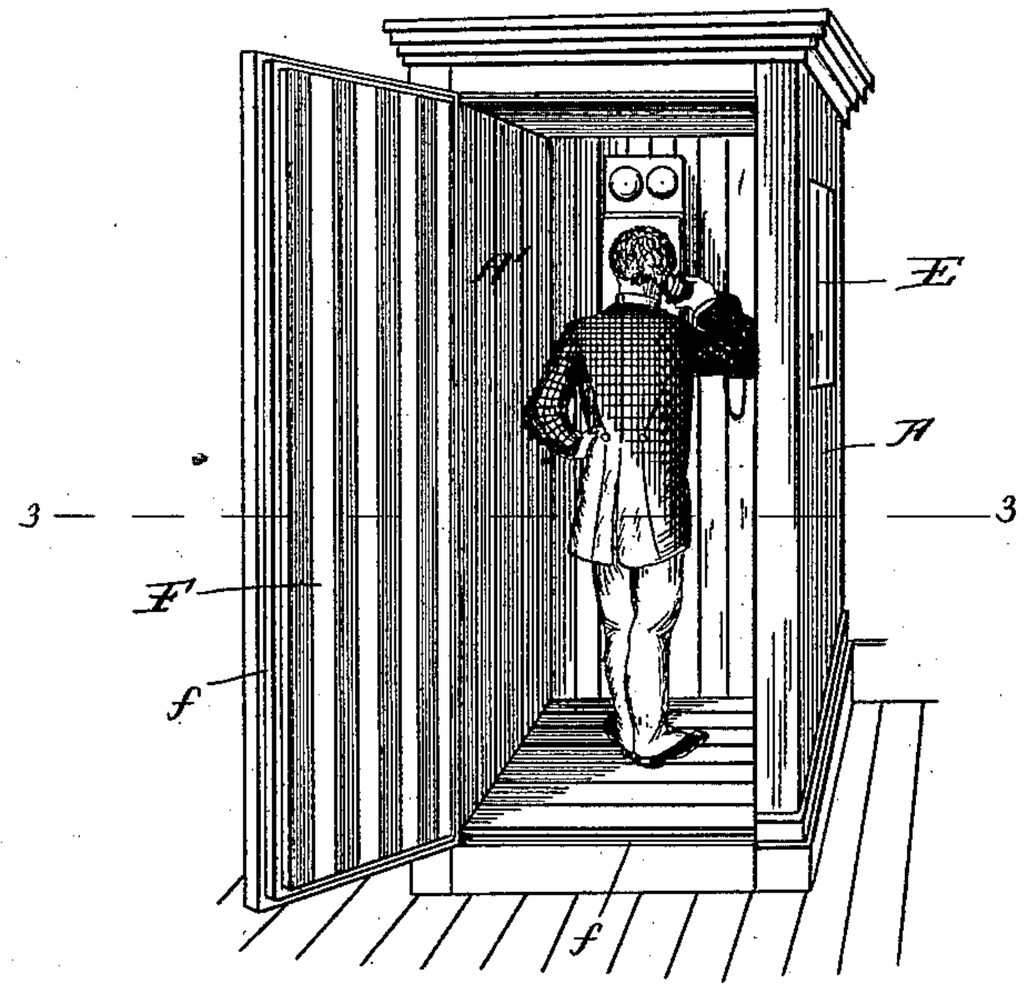
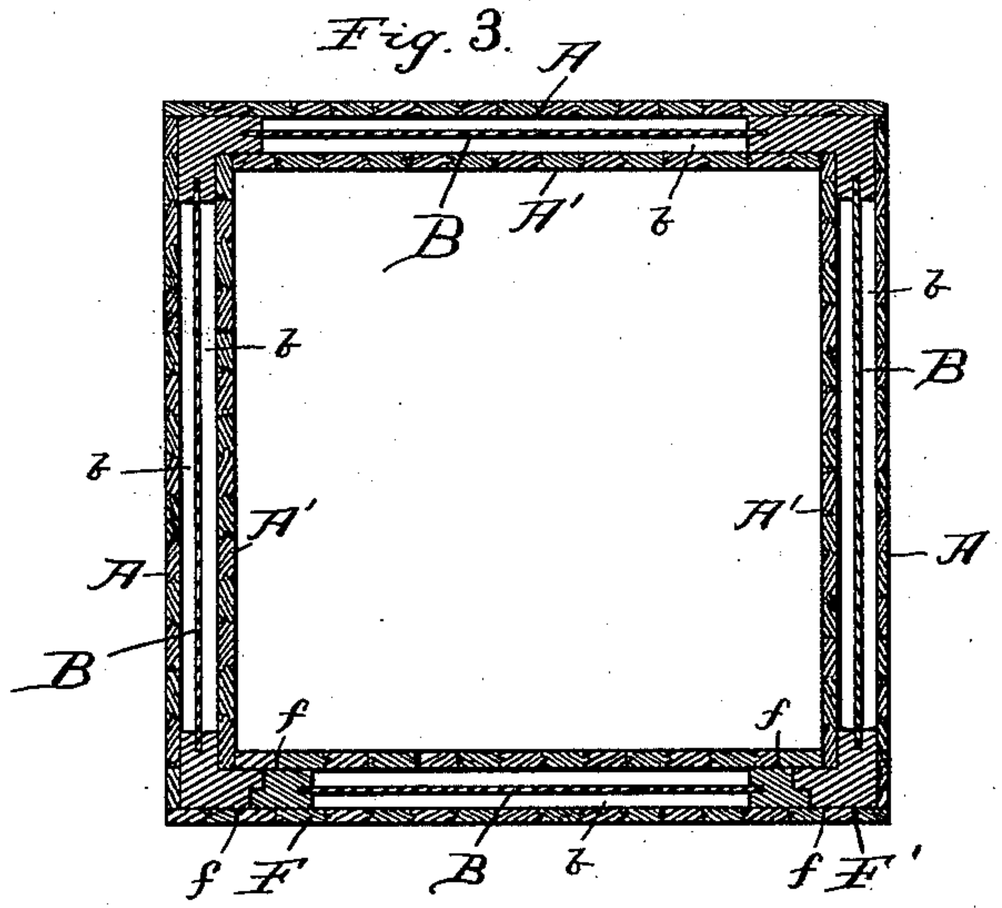


Fig. 3.



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his Attorneys:

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

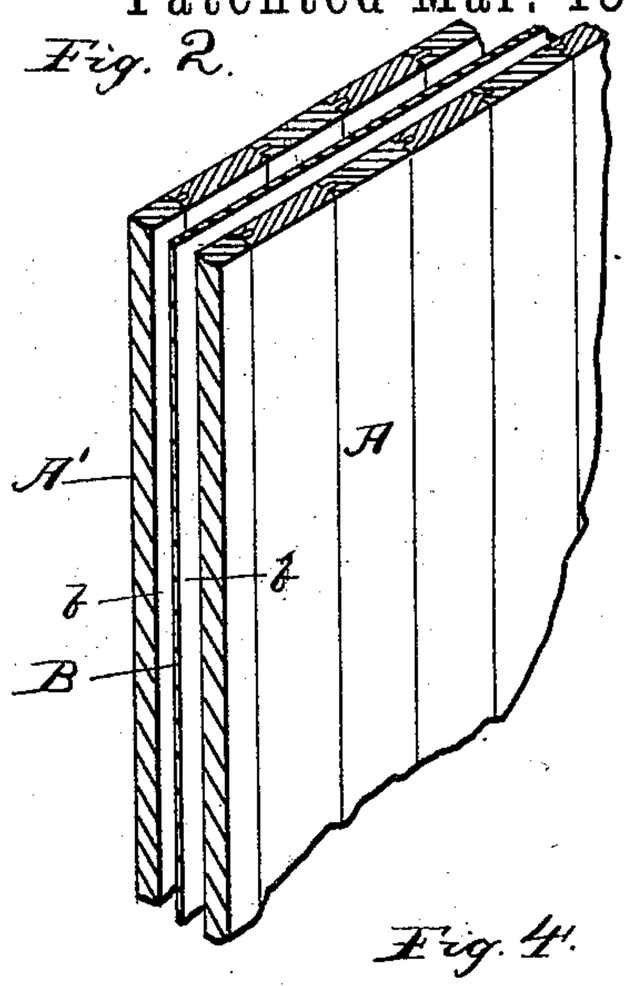


Fig. 4.

Fig. 7.

Fig. 8.

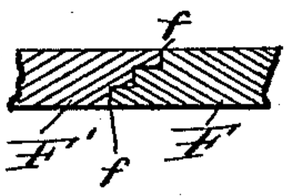


Fig. 6.

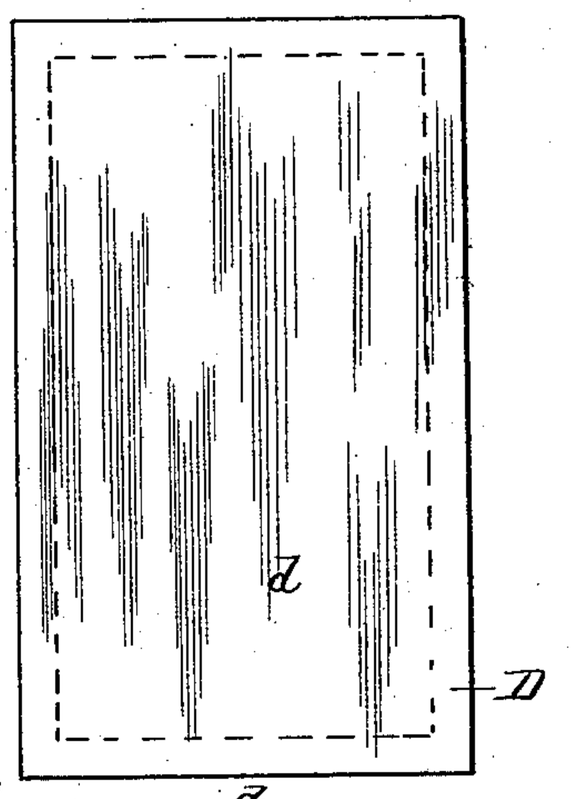


Fig. 5.

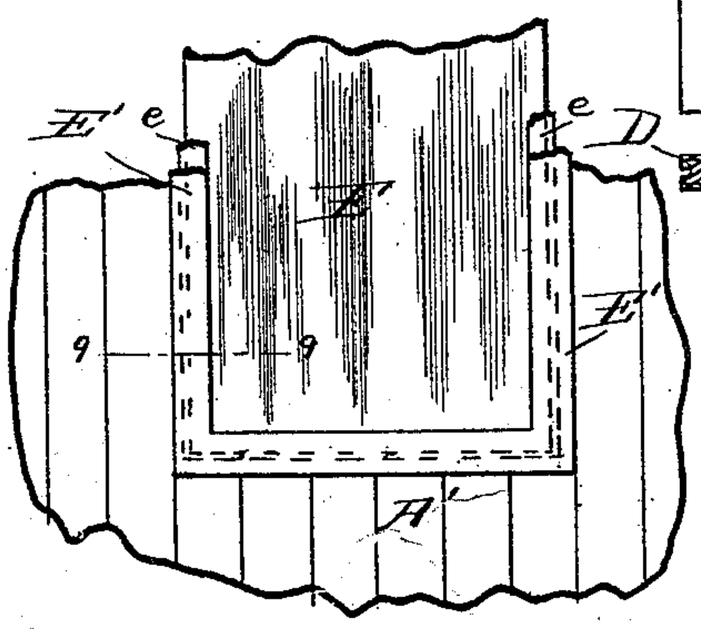
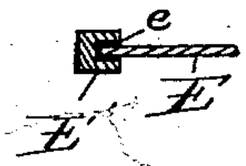


Fig. 9.



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UNITED STATES PATENT OFFICE.

CHARLES BALLOCH, OF NEW YORK, N. Y.

TELEPHONE-CABINET.

SPECIFICATION forming part of Letters Patent No. 359,492, dated March 15, 1887.

Application filed April 7, 1886. Serial No. 198,113. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BALLOCH, a citizen of the Dominion of Canada, residing in New York, in the county of New York and State of New York, have invented a new and useful Improvement in Telephone-Cabinets, of which the following is a specification.

This invention relates to the construction of closets and cabinets to be used in large rooms to inclose telephones or telegraph-instruments, or in other places where it is desired the closet or cabinet shall neither transmit sound to nor receive sound from the outside.

The invention consists, primarily, in a telephone or other closet or cabinet, the walls, &c., whereof are constructed substantially as hereinafter set forth, and are thereby adapted to cut off the passage of sound. To render the closet more effectually sound-proof I also construct the windows and doors in peculiar fashion; and the invention further consists in these and other details of construction.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a perspective view of a telephone-cabinet embodying my invention. Fig. 2 is a perspective view of a section or portion of one of its walls. Fig. 3 is a horizontal section on line 3 3 of Fig. 1. Figs. 4 and 5 are respectively a side elevation and cross-section, showing the outer casings of the double walls composed of flexible material, as cloth or felt. Fig. 6 is a partial elevation of a window which may be advantageously used, and Fig. 9 is a section showing the manner in which the glass is preferably secured. Fig. 7 shows the preferred method of making the joints between the pieces or parts making up the walls, &c. Fig. 8 is a sectional view intended to illustrate the meeting faces of a door and its jamb.

In Fig. 1 the wall of the cabinet is made up of an inner casing, A′, and outer casing, A, with an inclosed dead-air space, *b*, between them, and the flexible diaphragm B, dividing said space. These casings or sub-walls may be made of any known suitable material; but it is of course desirable that each of them be made as tight as possible, because sound will be only imperfectly shut off if cracks or minute openings of any kind be left therein. I therefore prefer to employ the common groove-and-tenon joint between the parts thereof, or some other form of joint in which the parts meet closely, it is true, but with abutting faces having other than flat plane surfaces, so that a straight-line passage through the wall cannot exist therein. The groove-and-tenon joint is a familiar and simple one and answers the purpose very well, as the air cannot pass through it without making several turns, these turns serving to break up the sound-waves and to prevent the transmission of noise through the wall.

The passage of noise is additionally guarded against by the use of a diaphragm, B, dividing the air-space into two spaces, *b b*, as indicated in Fig. 2. This diaphragm or partition may be of paper, felt, rubber, or any other suitable material, and more than one may be employed, if thought best.

In Figs. 4 and 5 the wall or section of wall may consist of a frame, D, covered at the sides with cloth, rubber, or other fabric, *d*. This form of the invention makes a very light and cheap cabinet.

In Figs. 6 and 9, E represents a glass window, and E′ the frame thereof. To prevent vibrations of the glass in obedience to the sound-waves, I prefer to set it in lead or other soft metal, as shown at *e*. When the window embodies more than one sheet of glass, all may be similarly set.

The doors of my cabinet may be constructed like the walls, and it is desirable that their edge-faces and the corresponding faces of the door-jambs be formed with a number of angles, after the similitude of the doors of burglar-proof safes. This is illustrated in Fig. 8, where F may represent the door, and F′ the jamb, the separating-line *f* indicating the conformation of their meeting faces.

Of course the cabinet may be provided with a covering made in any of the ways set forth for the construction of the walls.

My aim in this invention has not been simply to make a cabinet which, by the tightness of its joints and the non-conducting character of its material, will resist the sound, but to devise a cabinet which, while it possesses the qualities above mentioned, is also adapted

to resist vibration under the action of sound-waves without being so heavy or solid as to be objectionable or expensive.

I am of course aware that it is now customary to build inclosures around telephones to prevent the talk taking place thereat from being overheard by those in the room, as well as to obviate interference by outside noise with the operation of the telephone, and hence I do not claim any such inclosure, broadly.

I claim—

1. The sound-deadening telephone-cabinet having walls consisting of an inner and outer casing with an intermediate air-space and a flexible diaphragm of paper, felt, rubber, or other like material in said space between said inner and outer casings, substantially as specified.

2. The sound-deadening telephone-cabinet having walls consisting of an outer and inner casing with an intermediate air-space between, said inner and outer casings being composed of flexible material—such as cloth, rubber, or the like—secured to a suitable frame, substantially as specified.

3. The sound-deadening telephone-cabinet having walls furnished with flexible sound-deadening diaphragms with an air-space between the inner and outer casings of said double walls and provided with a window, the glass frames whereof have soft-metal settings, substantially as specified.

4. The sound-deadening telephone-cabinet having double walls consisting of an inner and outer flexible fabric casing of cloth, rubber, or like material secured to a frame, said cabinet being furnished with a door and door-casings, the faces whereof are provided with two or more offsets or angles, substantially as specified.

CHARLES BALLOCH.

Witnesses:
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EDMUND ADCOCK.