(No Model.) 2 Sheets—Sheet 1.

C. H. DORENWEND.

TELEPHONE ATTACHMENT.

No. 506,646. Patented Oct. 10, 1893.

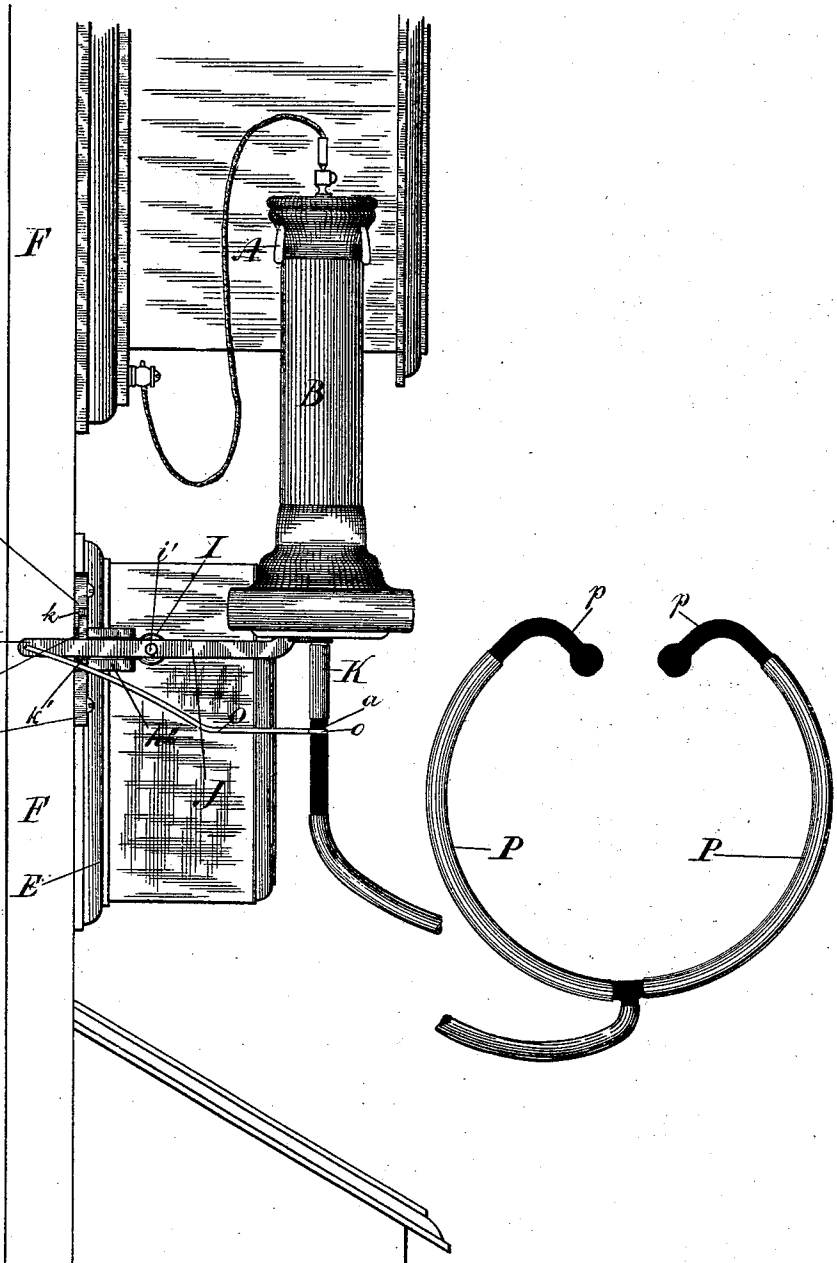

Fig. 1.

Witnesses
C. L. Laurie
M. B. Angell.

Inventor:
C. H. Dorenwend
by Church & Riches
his Attys

(No Model.) 2 Sheets—Sheet 2.

C. H. DORENWEND.

TELEPHONE ATTACHMENT.

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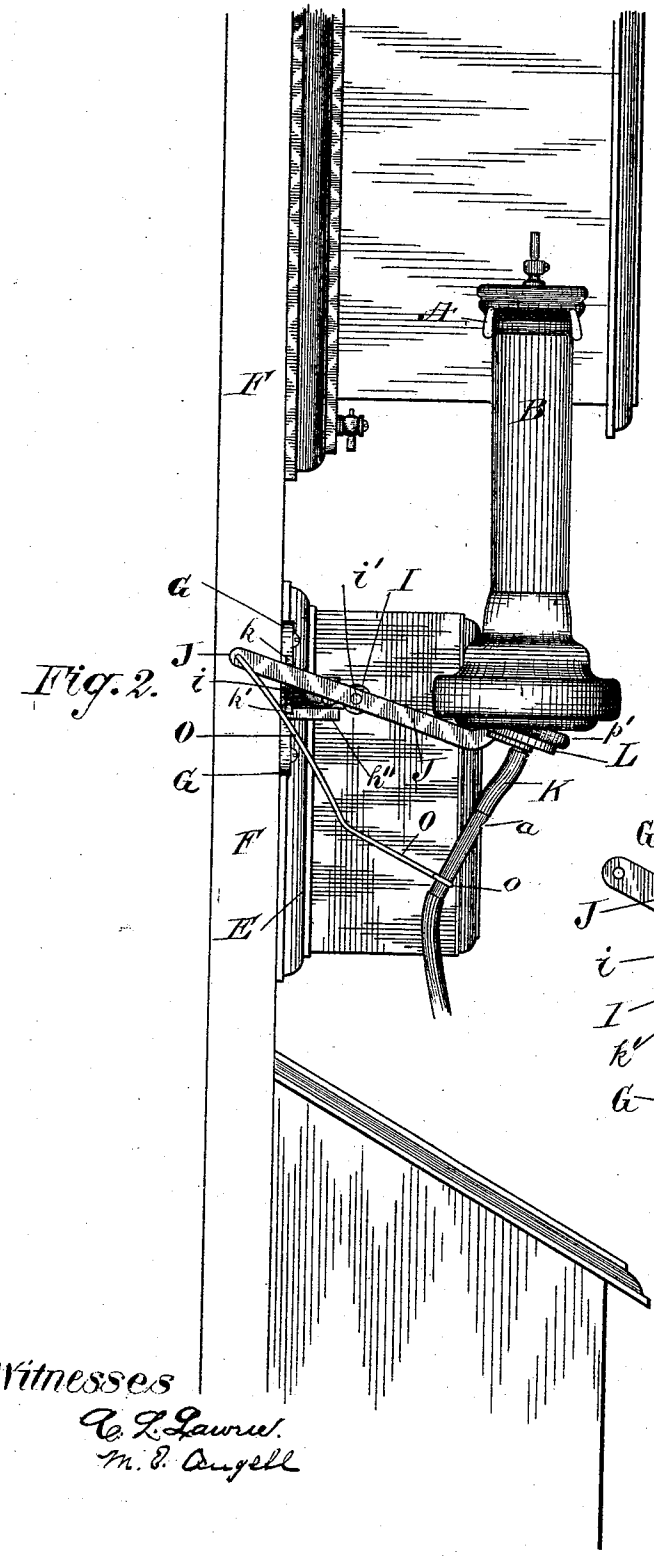

Fig. 2.

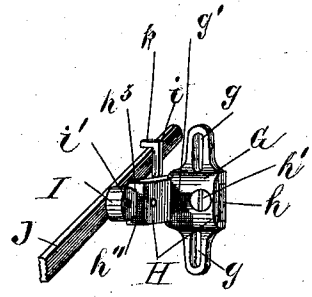

Fig. 4.

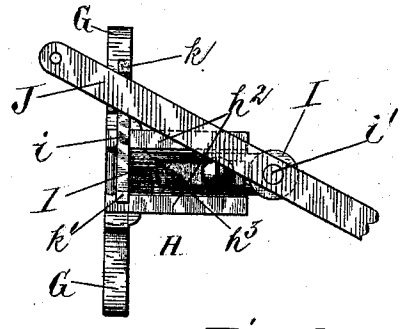

Fig. 3.

Witnesses
C. L. Lawrence
M. E. Angell

Inventor:
C. H. Dorenwend
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his Attys

UNITED STATES PATENT OFFICE.

CHRISTIAN H. DORENWEND, OF TORONTO, CANADA.

TELEPHONE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 506,646, dated October 10, 1893.

Application filed June 3, 1892. Renewed May 27, 1893. Serial No. 475,798. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN H. DORENWEND, electrician, of the city of Toronto, in the county of York and Province of Ontario, Canada, have invented a certain new and useful Attachment to Receivers of Telephone-Instruments; and I hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to an attachment by means of which the necessity of removing the telephone receiver from the supporting hook when the telephone is in use is entirely obviated, and the object of the invention is to so construct this attachment that when the telephone is not in use, it permits the telephone receiver to hang in its normal position, to depress the supporting hook to complete the bell circuit and open the speaking circuit. When however the telephone instrument is in use the attachment is so arranged as to lift the telephone receiver and support it in its elevated position to permit the supporting hook to rise and break or open the bell circuit, and close or complete the speaking circuit; and the invention consists essentially of a tube preferably composed of rubber or fabric material attached to the end of a pivoted arm, said arm being so arranged as to raise the end of the tube to cover the exposed part of the diaphragm of the telephone receiver, and also to lift the telephone receiver into an elevated position while the instrument and attachment are in use, said tube having a bifurcated end provided with ear pieces to enter the auricle or external ear, the whole device being constructed as hereinafter more fully set forth.

In the drawings:—Figure 1 is a view of a portion of the telephone instrument showing the end of the supporting hook, the telephone receiver, the attachment to the telephone receiver comprised of a tube having a bifurcated end, ear pieces in said end, the pivoted arm and fastening device; the telephone receiver in this view being shown in its raised position, and the attachment ready to be placed to the ear. Fig. 2 is a view of the same parts as illustrated in Fig. 1, showing in this instance the attachment hanging in its unemployed position, and showing the telephone receiver, and supporting hook, in their depressed positions. Fig. 3 is a view of the supporting arm, the pivot block, and the means for attaching the supporting arm to the frame of the telephone instrument or to the wall. Fig. 4 is a perspective view of the front of the pivot block, the supporting arm, means for attaching the pivot block and arm to the frame of the instrument or to the wall.

Like letters of reference refer to like parts throughout the specification and drawings.

A, refers to the supporting hook by means of which the bell circuit is made and the speaking circuit is broken, and vice-versa, when the said hook is, respectively, in its depressed or elevated position.

B, refers to the telephone receiver held in position by the supporting hook A, and adapted by its own weight to hold down the said hook to form the bell circuit and break the speaking circuit.

Secured to the frame work E, of the telephone instrument or to the walls F, is a metallic plate G, having two vertical slots g, to permit of the vertical adjustment of the said plate. Formed in the metallic plate G is a groove in which slides the arm h, of the angle iron H, the said arm h, being provided with a set screw h' extending through the longitudinal slot g' in the plate G.

Formed in the side of the arm h'' of the angle iron H, is a groove h''' in which slides the pivotal block I, having an L-shaped flange i, secured to or forming part of its rear end. The front end of the block I is enlarged to permit of the pivot pin i' passing therethrough and mounted on the pivot pin i' is the pivoted arm J, carrying on its front end the tubular connection K. Connected to the top and bottom of the L-shaped flange i, are two stops, respectively, k and k', to arrest the movement of the arm J after it has traveled a predetermined distance.

It might here be stated that the upper one of the stops k arrests the upward travel of the rear end of the pivoted arm J when the attachment is hanging unemployed to prevent the said attachment being displaced and that the lower stop k' arrests the movement of the arm J when the said arm is being brought into its employed position so that the said arm or tubular connection K will be prevented from lifting the telephone receiver B

off of the supporting hook A. Fastened to the front end of the arm J is a collar L through which passes the tubular connection K.

It might here be stated that, that end p' of the tubular connection K adjacent to the diaphragm of the telephone receiver B, is enlarged to completely cover the exposed part of the diaphragm to prevent any portion of the sound being lost, and also as far as possible to prevent foreign sounds entering said tubular connection. Connected to the rear end of the arm J is one end of a wire or rod O, while the opposite end is looped to encircle the tubular connection K. It might here be stated that a portion of this tubular connection is hardened, and that formed in this hardened portion is a notch, a, into which enters the looped end o, of the rod O, while the attachment and telephone instrument are in use. By this means the telephone receiver B is supported in its elevated position without strain on the attachment or on the party using the telephone instrument.

The tubular connection K is forked at its outer end, or in other words, provided with two branches P, to partially encircle the head of the party using the instrument and fitted at the outer end of each of the branches P are ear pieces p to enter the auricle or outer ear. While unemployed this attachment hangs in the position shown in Fig. 2 of the drawings, to allow the telephone receiver to depress the supporting hook A. When, however, it is desired to use the telephone instrument the ear pieces p are placed in the auricle or outer ear and the tubular connection drawn until the looped end o of the rod O enters the notch, a, of the tubular connection K and holds the arm J in the horizontal position shown in Fig. 1. While the arm J is in its horizontal position the enlarged end p' of the tubular connection K is thrust into the depression in the end of the telephone receiver B until the opening in that tubular connection incloses the exposed part of the diaphragm in the said telephone receiver.

The object of the arrangement of slides is to permit the fastening plates to be so adjusted as to bring the outer end of the arm J and the enlarged end p' of the tubular connection into the proper location for raising the telephone receiver B to allow the supporting hook A to make the necessary contacts, and also to bring the said enlarged end p' into a proper position in the end of the receiver to cover the exposed part of the diaphragm.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An attachment to the receiver of a telephone instrument comprising a flexible tube one end of which is fitted with an ear piece and the other end adapted to inclose the diaphragm of the receiver, a pivoted arm adapted to support in position the flexible tube and to raise the receiver off the supporting hook when the instrument is in use, substantially as described.

2. An attachment to the receiver of a telephone instrument comprised of a flexible tube one end of which is held in position by a pivoted arm and adapted to inclose the exposed part of the diaphragm of the telephone receiver while the other end of the flexible tube is forked, an ear piece fitted to each of the branches at the forked end of the said tube, means for raising the supporting hook to form a speaking circuit through the telephone instrument, a pivot block secured to the telephone instrument, a pin passing through the said pivot block and the said arm, substantially as described.

3. An attachment to the receiver of a telephone instrument comprised of a flexible tube one end of which is held by a pivot arm and adapted to inclose the exposed portion of the diaphragm of the receiver of the telephone instrument while the other end of the said flexible tube is provided with an ear piece, a pivot block secured to the frame work of the telephone instrument to which the said arm is pivoted, a spring one end of which is secured to the said arm while the opposite end encircles the said tube, the said arm adapted to raise the said tube, the said arm and tube adapted to raise the receiver of the telephone instrument and the supporting hook and hold them raised while the telephone instrument is in use to form a speaking circuit and to permit the receiver of the telephone instrument and the supporting hook to fall when the telephone instrument is not in use to form a bell circuit and break the speaking circuit, substantially as described.

4. An attachment to the receiver of a telephone instrument comprised of a flexible tube one end of which is adapted to inclose the exposed portion of the diaphragm of the telephone receiver while the opposite end of the said tube is fitted with an ear piece in combination with a pivot arm one end of which encircles that end of the flexible tube adjacent to the telephone receiver, a plate secured to the frame work of the telephone instrument having a projection at right angles therefrom in which slides the pivotal block, a pin passing through the said arm and pivotal block to permit of the horizontal adjustment of the said arm, a spring one end of which is secured to the said arm while the other end encircles the flexible tube, said arm adapted to raise the receiver of the telephone instrument and hold the same in its elevated position to permit the supporting hook to rise and complete the speaking circuit, the said spring causing the said arm to be held in its horizontal position, substantially as described.

5. An attachment to the receiver of a telephone instrument comprised of a flexible tube one end of which incloses the exposed portion of the diaphragm of the telephone receiver while the opposite end is fitted with an ear piece, a pivoted arm encircling that end of

the flexible tube adjacent to the receiver of the telephone instrument, a plate secured to the frame work of the telephone instrument, vertical slots in the said plate to permit of its vertical adjustment, a projection extending outwardly from and at right angles to the said plate, guides in the said projection, a pivot block sliding in said guides, a pin passing through said pivoted arm and pivot block, a flange formed at the end of the said pivot block through which passes the pivot pin, stops arranged at either end of said flange to arrest, respectively, the upward and downward movements of the said pivoted arm, a spring one end of which is secured to the said pivoted arm while the opposite end of said spring encircles the said flexible tube, substantially as described.

6. An attachment to the receiver of a telephone instrument comprised of a flexible tube one end of which incloses the exposed part of the diaphragm of the receiver of the telephone instrument while the opposite end of the said tube is fitted with an ear piece, a pivoted arm encircling the flexible tube, at the end adjacent to the receiver of the telephone instrument and adapted to support the said flexible tube, a plate secured to the frame work of the telephone instrument vertical slots formed in said plate to permit of its vertical adjustment, a slide formed in said plate into which enters one end of an angle iron, a set screw to permit of the lateral adjustment of the said angle iron a slide in that portion of the angle iron extending outwardly from the said plate, a pivot block entering into the said slide, a set screw to permit of the horizontal adjustment of said pivot block, a pin passing through said pivot block and pivoted arm and stops arranged to arrest, respectively, the upward and downward movements of the said arm and a spring one end of which is secured to the said pivoted arm while the other end encircles the said flexible tube, substantially as described.

Toronto, May 2, 1892.

CHRISTIAN H. DORENWEND.

In presence of—

CHAS. H. RICHES,

M. E. ANGELL.