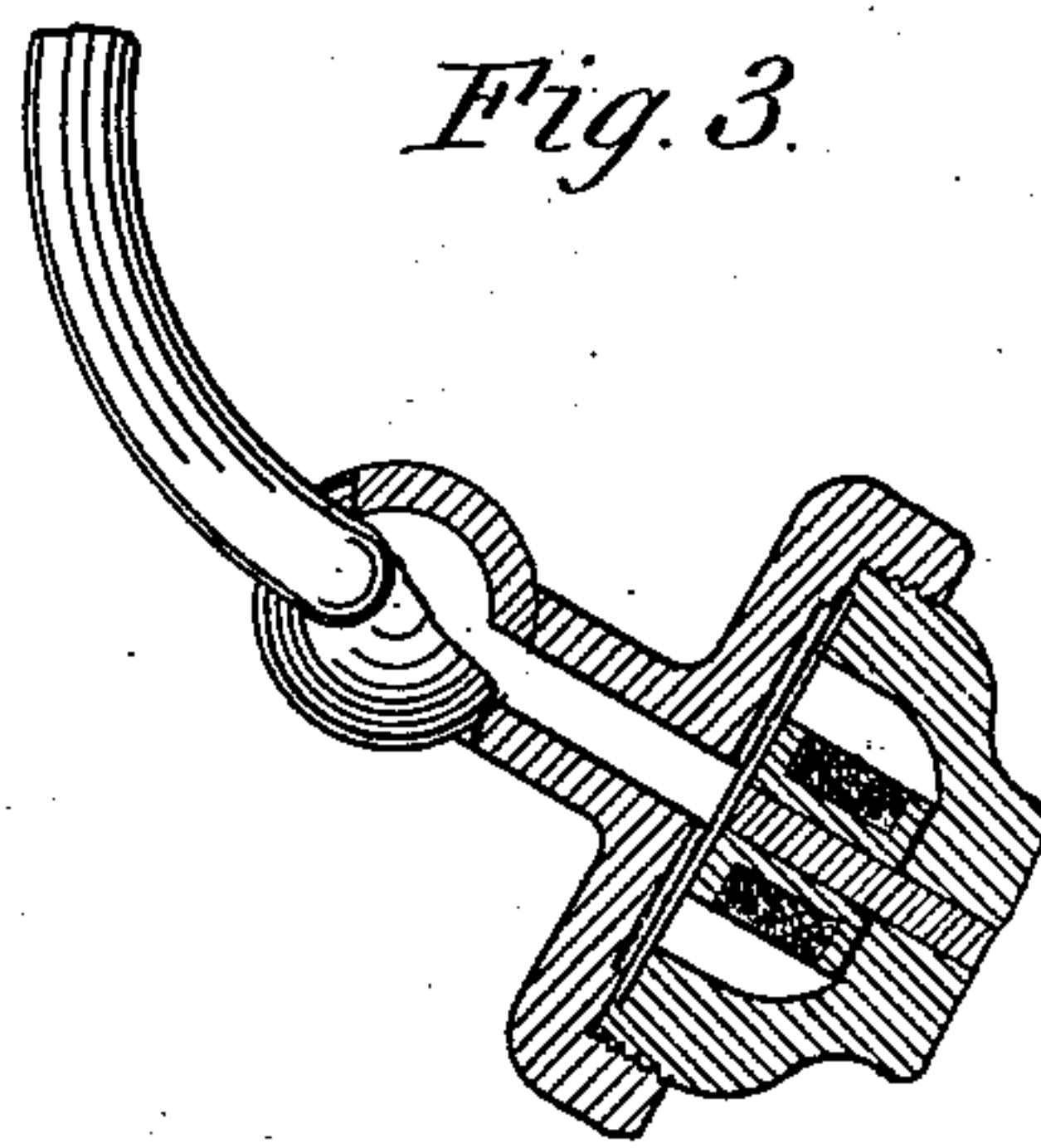
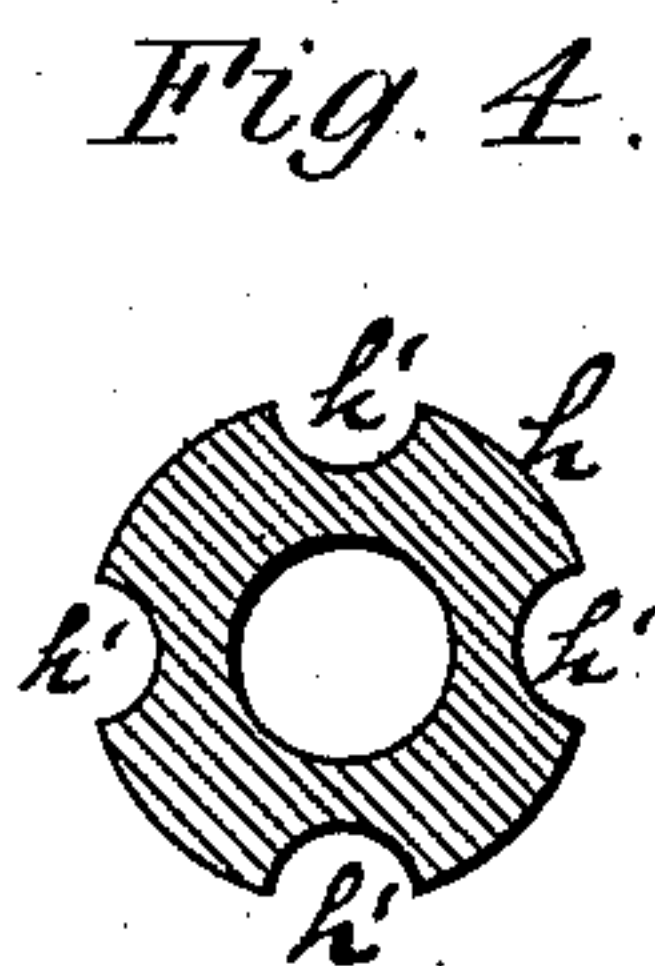
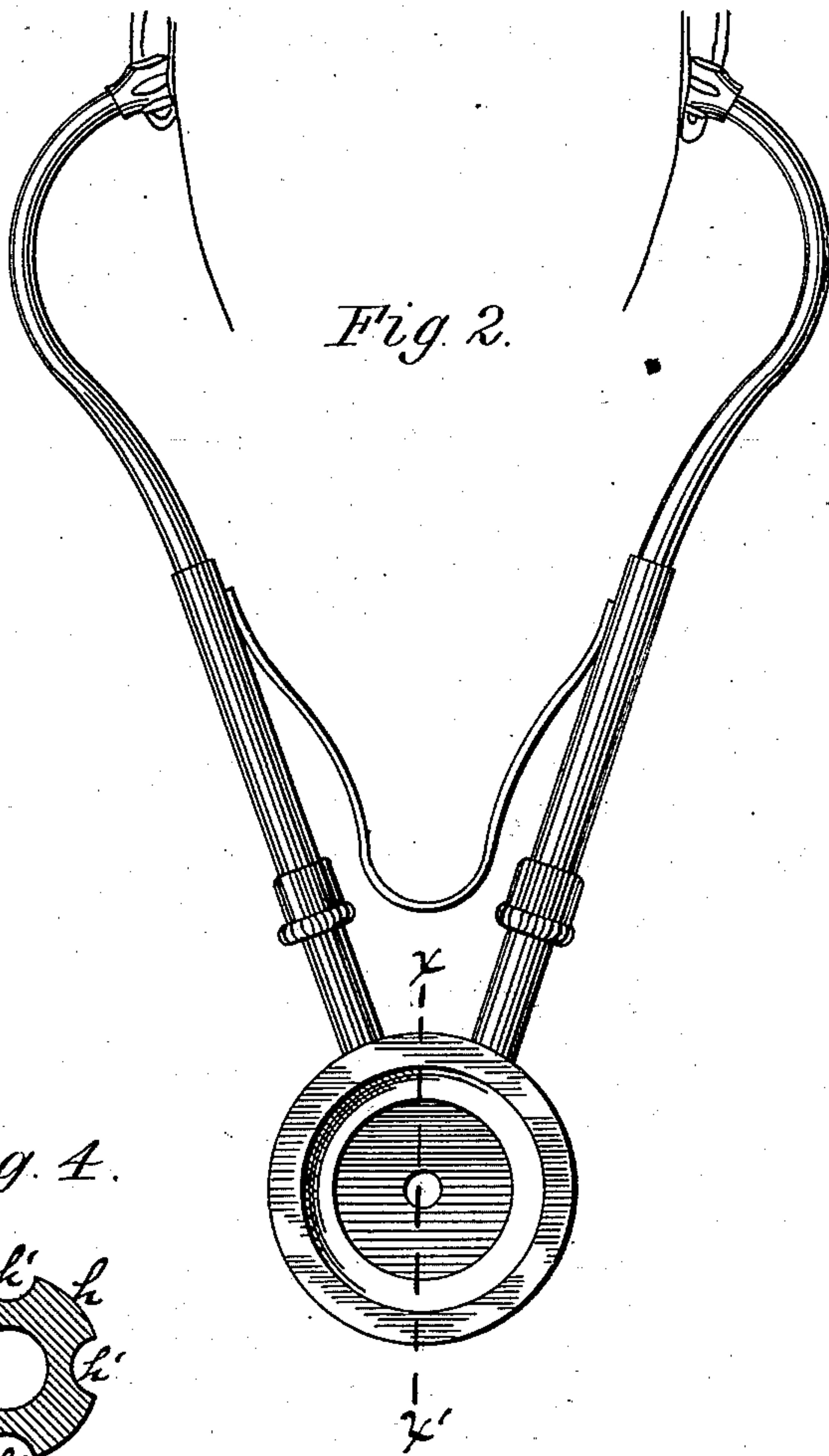
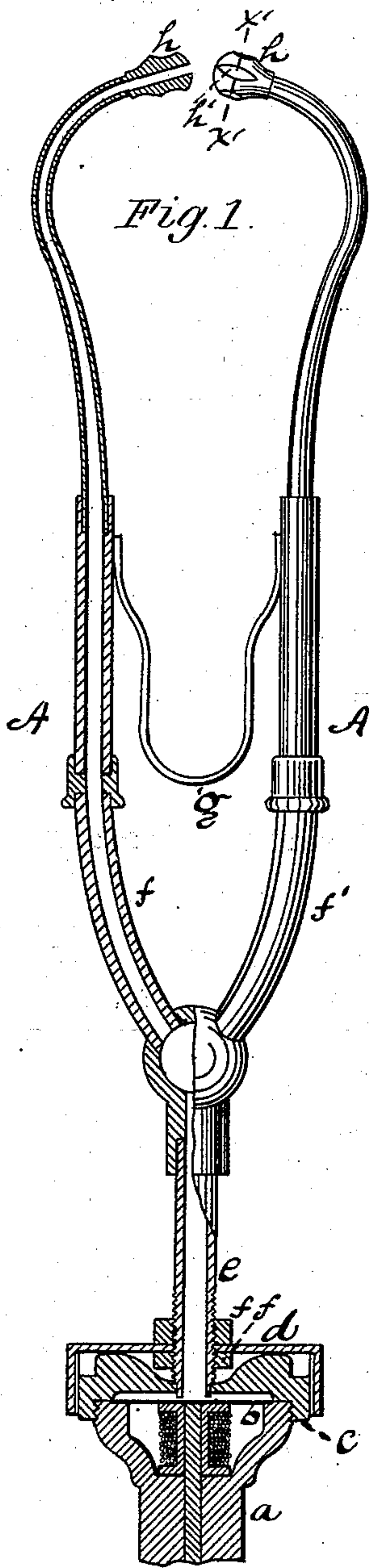


(No Model.)

G. R. SHEPHERD.
TELEPHONE.

No. 286,737.

Patented Oct. 16, 1883.



Witnesses.
Chas. L. Rindett.
James J. Greene.

Inventor.
George R. Shepherd
By W. E. Simonds
Att'y

UNITED STATES PATENT OFFICE.

GEORGE R. SHEPHERD, OF HARTFORD, ASSIGNOR OF ONE-HALF TO WILLIAM EDGAR SIMONDS, OF CANTON, CONNECTICUT.

TELEPHONE.

SPECIFICATION forming part of Letters Patent No. 286,737, dated October 16, 1883.

Application filed March 24, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE R. SHEPHERD, of Hartford, in the county of Hartford and State of Connecticut, have invented a certain new and useful Improvement in Telephones, of which the following is a description, reference being had to the accompanying drawings, where—

Figure 1 is a side view, partly in central vertical section, of an apparatus embodying my said improvement. Fig. 2 is a view of an apparatus, substantially the same as represented in Fig. 1, applied to a person's ears. The flexible tubes are bent so that the bottom or under side of the telephone proper is turned toward the observer. Fig. 3 is a view of the telephone represented in Fig. 2 in section on the plane $x x$. The telephone shown in Figs. 2 and 3 is modified somewhat from the telephone shown in Fig. 1. Fig. 4 is an enlarged view, in cross-section, on the plane $x' x'$ of one of the ear-pads.

My improvement is an attachment for any of the common forms of telephone, particularly useful where a telephone is located in a noisy room, or at the end of a long line, where the sound-producing impulse becomes weak, or where the user's hearing is slightly defective. The telephone itself—by which I mean that part of telephonic apparatus which receives and communicates to the listener the sounds transmitted to it—forms no part of my invention.

The invention consists, speaking generally, of the combination of a telephone, a sound-gathering cap suitably attached to the telephone, and a bifurcated tube leading therefrom for conveying the sounds to both ears when those bifurcated tubes are so joined and connected that they may be grasped and adjusted to the listener's ears by the use of only one hand.

The invention further consists in details for carrying out this idea.

The letter a denotes the body of a telephone, b the vibrating diaphragm which reproduces the transmitted sounds, and c an end plate which secures the diaphragm in place.

The letter d denotes a cap which may be attached to the periphery of the end plate, c , by spring-pressure, by screwing thereon, by clamps, or in any other convenient manner.

The means intended to be represented in the drawings is an elastic lining of soft rubber within the cap d . This cap d is perforated axially for the passage of the tube e , which runs down almost to contact with the diaphragm b . Tube e is exteriorly screw-threaded and provided with the nuts $f f$, by means of which the position of the tube with reference to the diaphragm may be adjusted to a nicety. At the upper end this tube e bifurcates, giving one tube for each ear.

The apparatus will work reasonably well if the two branching tubes are stiff or rigid, there being in such case a pivotal joint at the point of bifurcation, and a suitable connection between the two branches, enabling them to be handled and adjusted to the ears by one hand of the user; but it is better that a part, f , of each of these tubes be flexible, obviating the use of a pivot-joint at the point of bifurcation, and allowing the tubes to bend, and thereby adapt themselves to different positions more readily. The upper part of the two branching tubes may be of hard rubber or metal. The two tubes are connected by spring g , which acts in the capacity of a pivot as well as a spring, tending to close the tubes together. A separate pivot-connection may be used, but I prefer the spring, serving both purposes. If the two tubes be grasped in one hand, at about the height A , and pressed together, the ends of the tubes will move apart, as represented in Fig. 2, and the tubes may be applied to both ears by one hand of the user. The ends of the tubes, which come in contact with the ears, are furnished with pads h of suitable material—soft rubber, for instance—and are peripherally fluted by flutes h' , to permit access of the exterior air.

In Fig. 3 (and Fig. 2 is a different view of same) I show the tube e made integral with the end plate of the telephone.

I claim as my improvement—

The combination of the telephone, the sound-gathering cap suitably attached thereto, the bifurcated tube, and the pivotal connection joining the bifurcations, all substantially as described, and for the purpose set forth.

GEORGE R. SHEPHERD.

Witnesses:

W. E. SIMONDS,
CHARLES L. BURDETT.