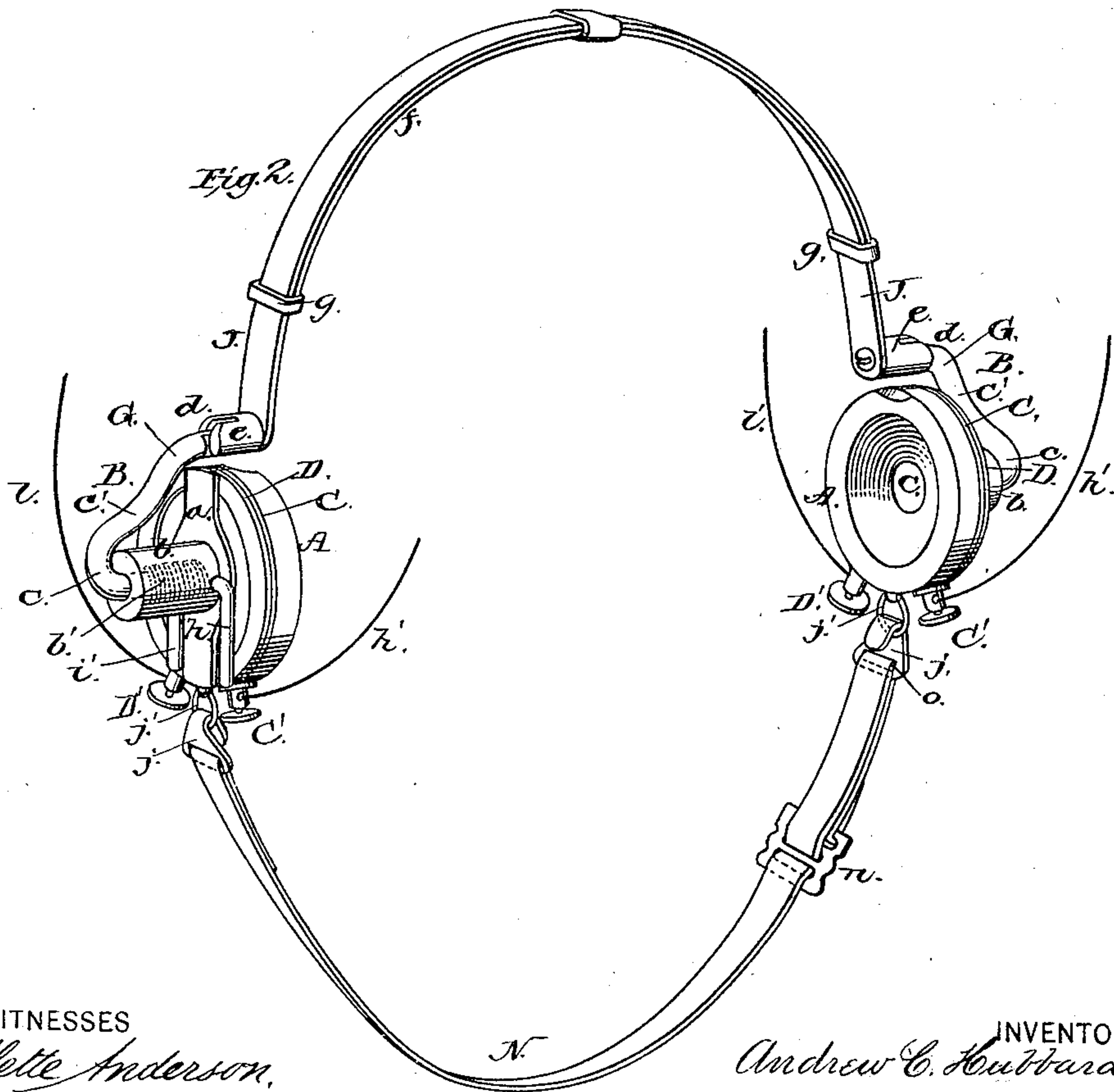
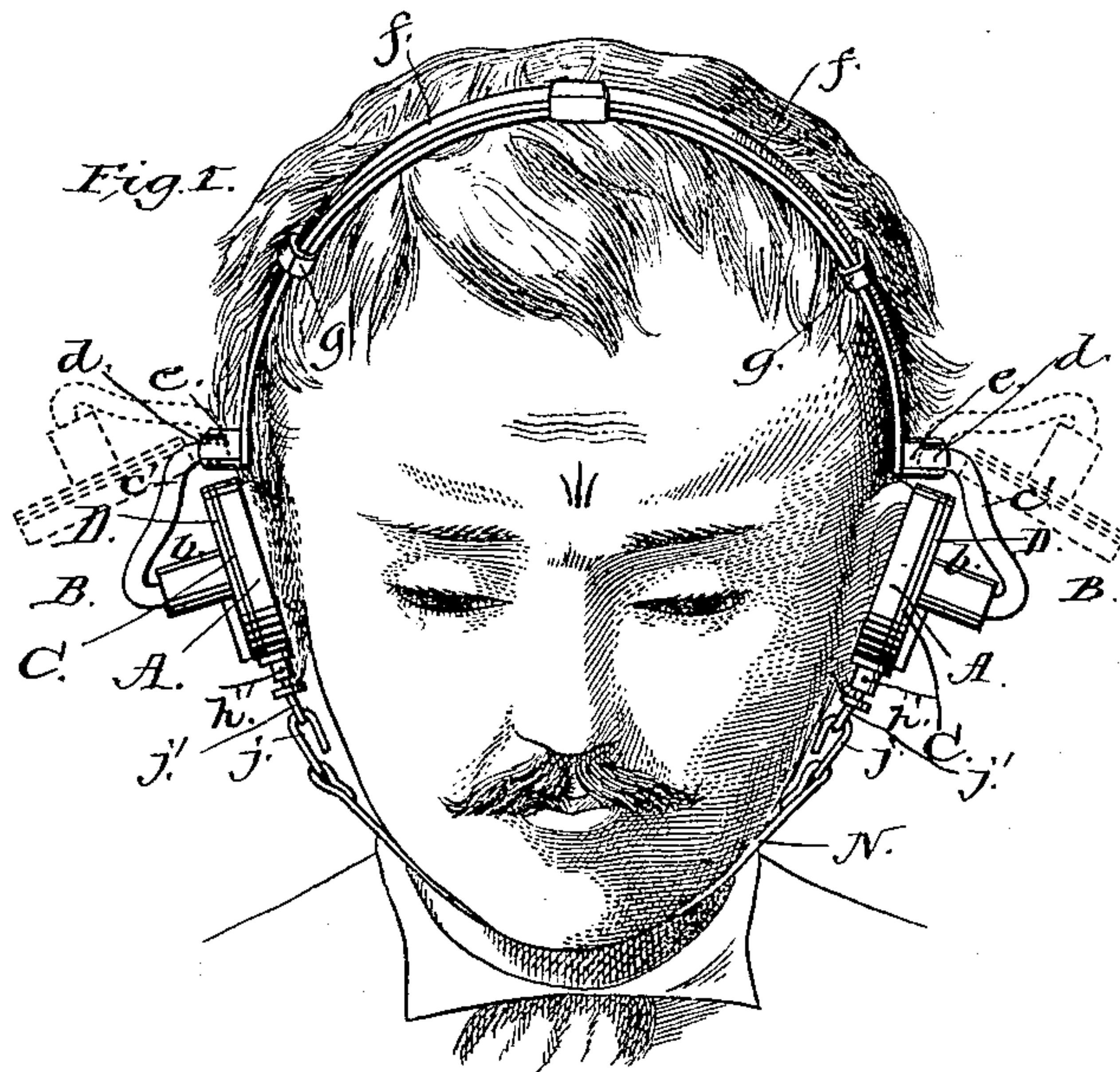


(No Model.)

A. C. HUBBARD.
Telephone Support.

No. 230,779.

Patented Aug. 3, 1880.



WITNESSES
Villette Anderson,
E. J. Maxi

INVENTOR
Andrew C. Hubbard,
by E. W. Anderson,
his ATTORNEY

UNITED STATES PATENT OFFICE.

ANDREW C. HUBBARD, OF DANBURY, CONNECTICUT.

TELEPHONE-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 230,779, dated August 3, 1880.

Application filed May 1, 1880. (No model.)

To all whom it may concern:

Be it known that I, ANDREW C. HUBBARD, of Danbury, in the county of Fairfield and State of Connecticut, have invented a new and valuable Improvement in Telephones; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of my improved telephone applied to the head. Fig. 2 is a perspective view of the same detached.

This invention has relation to improvements in telephones.

The object of the invention is mainly to devise a telephone which may be confined to the head, thus leaving the hands free, and to improve such devices generally.

The nature of the invention consists in two flexible bands of magnetized steel sliding over each other and confined by guide-loops, carrying at their ends a telephone, whereby the connection between the telephones is made adjustable to fit a head of any size.

It also consists in a hinge-connection between the magnets of the telephones and the ends of the supporting-band, whereby, when the device is on the head, the ear-caps may be thrown off from the ear when the operator would engage in ordinary conversation, and may be made to conform to any shaped head with facility.

It also consists in magnets of ogee or angular form, one leg of which is wrapped with wire and works in connection with the diaphragm, and the other is carried out beyond the rim of the telephones and hinged to the supporting-band, whereby the said telephones are made to set out beyond the plane of the ends of said bands to suit the projecting position of the ears relative to the head, while the bands bear upon the head from end to end.

It finally consists in an elastic band passing under the chin and attached at its ends to the telephones, which band is adjustable as to length, and acts in connection with the supporting-bands to hold the telephones against the ears, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates the concave ear-pieces or caps of the telephones B; and C are the diaphragms, pressed by their margins against the ear-pieces by means of the metallic rings D and the screws passing through the same and the said diaphragm into the said ear-pieces. The rings D are bridged diametrically by means of the plates *a*, carrying at the central point of the rings a projecting cylinder, *b*, through which passes one arm, *c*, of an ogee or angular shaped magnet, G. The magnets G also pass through the bridges *a* with the extremities of their arms *c*, and that portion, *b'*, thereof within the cylinders is wrapped with wire in the usual way of electro-magnets. The remaining arm, *c'*, of these magnets extends outward beyond the telephones, as shown in Fig. 2, and its extremity is bent parallel to the perimeter of the ear-pieces and knuckle-jointed, as at *d*, to the offset *e*, projecting out at right angles from the end of the metallic bands J. The bands are made of magnetized steel bent in the arc of a circle, and having their lapped portions united by means of the loops *g*.

The bands J, which form together the support of the telephones, are extensible relatively to each other, and thus allow the said telephone's adjustment to suit a head of any size.

All the metallic parts of the telephones are nickel-plated, the diaphragms excepted, and the magnetized bands J form a very good electrical connection between the said telephones. The magnets may be, however, connected to the binding-post C' upon the ear-pieces by an insulated wire, *h*, and the said posts connected by a similar wire, *h'*, and the telephones will be perfectly in communication.

Upon the ear-pieces is located a second binding-post, D', to which the circuit-wires *l* *l'* are secured, and which are connected to the magnets G each by an insulated wire, *i*.

N indicates an elastic band passing under the chin and secured removably by means of hooks *j* to rings *j'* on the ear-pieces. This band acts in connection with the supporting-band to hold the ear-pieces in position on the ear.

One of the hooks *j* has a slot, *o*, in its end, through which one end of band N is passed and secured to an adjustable slide-loop, *n*, on

the said band. By this means the said band may be lengthened or shortened, and fitted to any sized head.

5 The magnets being hinged to the supporting-bands J, the telephones may be thrown off from the ears, should the operator desire to engage in ordinary conversation, into the position shown in dotted lines.

10 What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the telephones B, of the metallic bands J, overlapping each other at their ends, and extensible relative to each other, substantially as specified.

15 2. The combination, with the telephones B, of the curved supporting-bands J, attached to said telephones, overlapping each other and connected extensibly by the loops g, substantially as specified.

20 3. The combination, with the telephones B and the angular magnets G, of the arched supporting-bands J, hinged to the outer leg of said magnets, substantially as specified.

4. The combination, with the telephones B, of the ogee or angular magnets G, secured thereto at their centers, and having one arm extending out beyond the edges of the same, and the extensible curved bands J, provided with the end offsets, e, knuckle-jointed to the projecting arm of the magnets, substantially as set forth. 25 30

5. The combination, with the curved or arched supporting-bands J and the telephones B on the ends thereof, of the elastic chin-strap N, removably connected to the lower edges of the telephones, and adjustable as to length, substantially as specified. 35

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ANDREW COOMBS HUBBARD.

Witnesses:

CYRUS STURDIVANT,
DAVID B. BOOTH.