

My invention consists of an apparatus to send and receive the natural voice through space. It consists contains the following pieces.

n° 1) A megaphone made of metal

2) is a metallic connection having two hollow arms

3) is a metallic tube having at its extremity a disk of metal (7 on the diagram) on which it screws. The ~~exterior~~ inferior extremity of this tube passes through ~~the~~ ^{one of the 2 sides} ~~upper and lower~~ sides of the box and is held in position by the metallic disk which is screwed to the sides of the box. The upper extremity of the metal tube is connected with the megaphone by the piece n° 2.

4) Is a metallic gridiron

5) and 5') are two square wooden frames of four or five centimeters.

6) Is a truncated hollow pyramid

6') Is the cover of the pyramid made of metal.

This truncated pyramid (6 and 6') makes the bottom of the box of the acoustic box which has n° 9.

7) The ~~above mentioned~~ ^{The (n° 7)} disk of metal mentioned above in n° 3.

8.) Speaking tube

9) is a square acoustic wooden box open at both ends use of this apparatus.

The above apparatus above described serves as a receiver and a transmitter and can vary as far as the proportions, the dimensions, and the substance and form concerned. of the various pieces are concerned.

Mode of Working.

The apparatus (receiver and transmitter) having been placed ~~is~~ adjusted in front of one another by the means of a telescope, or photoscope, one can speak in or hear the voice through the acoustic tube (n° 8)

On earth when there is ^{contrary} no wind one can speak at the distance of more than 500 meters, and on sea in the same conditions and especially when there is a fog at a distance of more than a kilometer

The same apparatus can be adapted as to a system of microtelephony ~~and then one can speak or hear the voice in front of the apparatus~~ in this case the speaker can place himself at a distance of more than a ⁵⁰ meters from the ~~receiver~~ ^{transmitter}. The voice can be heard ^{is heard more} or less distinctly ^{in the receiving telephone} according to ~~the~~ ^{as} the distance ^{intervening} between the speaker and the transmitter (Confer fig n° II).

(In the first case I call the apparatus Esophone (i.e. sender of ^{sound} voice) in the second case ~~Es~~ ^{Eu} I call it ~~Eu~~ when I use it as receiver I call it Endophone (i.e. collector of sound)

In case that this invention would necessitate a separate application for the Esophone and ~~the~~ ^{and} another for the endophone, I authorise Messrs. Munn & Co to file both of them in.

I claim as ~~part~~ ^{inherent} parts of the application, the ~~microphone~~ ^{microphone}, the acoustic box with the truncated pyramid, and the megaphone with the ~~acoustic~~ ^{acoustic} metallic tube, and the acoustic tube, and the general disposition of all and each of these pieces, as above described. The adaptability of the apparatus to microtelephony, to receive or ~~to~~ to transmit, the voice, ^{or the music} ~~either by the means of the tube or as~~ ^{by reflection of the sound as described}

~~I use~~ The effect of the grivison is to increase the distinctness
the use of the vibrator
I claim ~~that~~ the grivison which I put place in front of
the receiver ^{as part of the patent} ~~to~~ ^{increases} materially helps to ~~the~~ the distinctness of the
sound received because experience has taught me
that it materially increases the distinctness of the
sound received.

As to the Harmonicon, I wish only to secure the
exclusive privilege of use of the various pieces that
make it up, to produce harmonical effects or the
sound of the siren. This ~~of~~ harmonicon is under
patent pending, and I have made no change in it.
regard to it. Accordingly I would wish that you
will kindly attend to this matter, together with
the preceding.

As This present communication is irrespective of anything
that concerns my application for patents in wireless
telephony and telegraphy, ~~they are~~ which remain under
patent pending and may be the subject of a subsequent
application

Washington May 26th 1902

To Messrs. Munn & Co.

204
109

200

100



My invention consists of an apparatus to send and receive the natural voice through space. It contains the following pieces, (Confer. fig. 1):

- n^o. 1) is a megaphone made of metal
- " 2) is a metallic connection, having two hollow arms.
- " 3) is a metallic tube, having at its extremity a disk of metal (7 on the diagram), on which it screws. The inferior extremity of this tube passes through ~~the~~ ^{one of the} ~~upper, and lower~~ sides of the box, and is held in position by the metallic disk which is screwed in to the sides of the box. The upper extremity, of the metal tube, is connected with the megaphone, by the piece n^o. 2.
- " 4) is a metallic gridiron.
- " 5, 5') are two square wooden frames of four or five centimeters.
- " 5) is a truncated hollow pyramid, and 6' is the cover, of the pyramid, made of metal. This truncated pyramid (5 and 6'), makes the bottom of the acoustic box which has n^o. 9, and are held in this position, by four screws.
- " 7) is the disk of metal mentioned above in n^o. 3.
- " 8) is a speaking tube.
- " 9) is a square acoustic wooden box open at both ends.
- " 10) is a telescope.

The apparatus, above described, serves as a receiver

and a transmitter, and can vary as far as the dimensions, the substance and form of the various pieces are concerned.

Mode of Working - The apparatus (receiver and transmitter), having been adjusted in front of one another, by the means of a telescope or a photophone, one can speak in or hear the voice through the acoustic tube n^o. 8.

On earth, when there is no contrary wind, one can speak at the distance of more than 500 metres, and on sea in the same conditions and especially when there is a fog at a distance of more than a kilometer.

The same apparatus can be adapted ~~as~~ to a system of microtelephony, in this case the speaker can place himself at a distance of more than ~~a~~ 50 metres from the transmitter, the voice is heard more or less distinctly in the receiving telephone ^{according} to the distance intervening between the speaker and the transmitter. (Confer. fig. II).

In the first case I call the apparatus - "Esophone" (i.e., sender of sound); in the second case, when I use it as receiver, I call it - "Endophone" (i.e., collector of sound).

In case that invention would necessitate a separate application, for the Esophone and another for the Endophone, I authorise Messrs. Munn & Co. to file both of them in.

I claim as inherent parts of the application, the gridiron, the acoustic box with the truncated pyramid, and the megaphone with the metallic tube and acoustic tube, the connection, and the general disposition of all and each of these pieces, as above described; the adaptability of the apparatus to microtelephony to receive or to transmit, the voice or the music by reflexion of the sound as described.

I claim the use of the gridiron which I place in front of the receiver as part of the patent, because experience has taught me that it materially increases the distinctness of the sound received.

As to the "Harmonicon", I wish only to secure the exclusive privilege of use of the various pieces that make it up, to produce harmonical effects or the sound of the siren. This harmonicon is under patent pending, and I have made no change in your regard to it. Accordingly I trust you will kindly attend to this matter, together with the preceding

This present communication is irrespective of any ~~thing~~^{thing} that concerns my applications for patents in wireless telephony and telegraphy, which remain under patent pending and may be the subject of a subsequent applications.

R. Landell de Moura

Washington, May 26th 1902

To Messrs. Munn & Co.

My invention consists of an apparatus to send and receive the natural voice through space. It contains the following pieces:

- N^o 1, is a megaphone made of metal. (Confer. fig. I).
- " 2, is a metallic connection, having two hollow arms.
- " 3, is a metallic tube, having at its extremity a disk of metal (7 on the diagram), on which it screws. The inferior extremity of this tube passes through one of the sides of the box, and is held in position by the metallic disk which is screwed in the sides of the box. The upper extremity of the metal tube, is connected with the megaphone by the piece n^o 2.
- " 4, is a metallic gridiron
- " 5, 5', are two square wooden frames of four or five centimeters.
- " 6, is a truncated ^{hollow} pyramid, and 6', is the metallic cover of this pyramid. This truncated pyramid makes the bottom of the acoustic box which has n^o 9, and are held in ^{the} position, by ~~the~~ four screws.
- " 7, is the disk of metal mentioned above in n^o 3.
- " 8, is a speaking tube.
- " 9, is a square acoustic wooden box open at both ends.

The apparatus above described, serves as a receiver and a transmitter, and can vary as far as the dimensions, the substance and form, of the various pieces are concerned. — ^{10. a telephone.} Mode of Working.

The apparatus (receiver and transmitter), having been adjusted in front of one another by the means of a microscope or a photophone, one can speak in or receive

effects or the sound of the siren. This harmonicon
is under patent pending, and I have made no
change in regard to it. Accordingly I trust you
will kindly attend to this matter, to gether with
the preceding. ——— This present communication
is irrespective of any thing that concerns my appli-
cations for patents in wireless telephony and tele-
graphy, which remain under patent pending and
may be the subject of a subsequent applica-
tion.

R. Gendel de Mours

Washington, May 26th 1902

To Messrs. Munn & Co.

the voice through the acoustic tube n^o 8. — On earth when there is no contrary wind, one can speak at the distance of more than 500 meters, and on sea in the same conditions and especially when there is a fog at a distance of more than a kilometer.

The same apparatus can be adapted to a system of microtelephony in this case the speaker can place himself at a distance of more than a 50 meters from the transmitter. The voice is heard more or less distinctly in the receiving telephone, according to the distance intervening between the speaker and the transmitter (Corder. fig. II).

In the first case I call the apparatus "Esophone, i.e., sender of sound, in the second case, when I use it as receiver, I call it - Endophone, i.e., collector of sound.

In case that this invention would necessitate a separate application for the Esophone and another for the Endophone, I authorize Messrs. Munn & Co. to file both of them in.

I claim as inherent parts of the application, the gridiron, the acoustic box with the truncated pyramid, and the megaphone with the metallic tube and the acoustic tube, and the general disposition of all and each of these pieces, as above described; the adaptability of the apparatus to micro^{or}telephony, by reflexion of the sound as described, to receive or to transmit the voice or the music. — I claim the use of the gridiron which I place in front of the receiver as part of the present, because experience has taught me that it materially increases the distinctness of the sound received. — As to the Harmonicon, I wish only to reserve the exclusive privilege of use of the various pieces that make it up, to produce harmonical

Meus inventos consistem de um aparelho para enviar e receber a voz natural através do espaço. Ele contém as seguintes peças (confer. fig. 1).

nº 1) um megafone feito de metal.

2) uma conexão metálica, tendo dois braços côncavos

3) um tubo metálico, tendo em suas extremidades um disco de metal (7 no diagrama), no qual ele parafusa (comprime).

Na extremidade inferior deste tubo passa através de um dos lados da caixa e é segura em posição pelo disco metálico o qual está parafusado nos lados da caixa. A extremidade acima, do tubo de metal, está conectada com o megafone, pela peça número 2.

4) é uma grelha metálica.

5,5') são duas composições de madeira quadradas de quatro ou cinco centímetros.

6) é uma cavidade truncada pirâmide, e 6' é a coberta (capa) da pirâmide feita de metal.

Esta pirâmide truncada (6 e 6') faz o fundo da caixa acústica a qual tem nº 9, e são seguras em sua posição, por quatro parafusos.

7) é o disco de metal mencionado acima, no nº 3.

8) é um tubo falante.

9) é uma caixa acústica quadrada de madeira aberta em ambos os fins.

10) é um telescópio.

O aparelho acima descrito, serve como um receptor e transmissor, e pode variar tanto as suas dimensões, as substâncias e formas de várias peças são referidas.

Modo de trabalho - O aparelho (receptor e transmissor), tendo sido ajustado em frente um do outro, por meios de um telescópio ou um photophone, um pode falar nele, e o outro ouvir a voz através do tubo acústico nº 8.

Na terra, quando não há vento contrário, pode-se falar a distância de mais de 500 metros, e no mar nas mesmas condições e especialmente quando há garoa na distância de mais de um km. O mesmo aparelho pode ser adaptado para um sistema de microtelephony, neste caso o locutor pode colocar em si mesmo a uma distância de mais que 50 metros do transmissor, a voz é ouvida mais ou menos distintamente no telefone receptor, de acordo com a distância intermediária entre o locutor e o transmissor (confer. fig. II).

No primeiro caso, eu chamo o aparelho "Exophone" (ex. enviado de som); no segundo caso, quando eu uso ele como receptor, e o chamo: "Endophone" (ex: coletor de som).

No caso que a invenção necessitaria uma aplicação separada, para o Exophone e uma outra para o Endophone, eu autorizo Mrs. Munn & Co. para registrar ambas.

Eu pretendo as partes inerentes da aplicação, a grelha, a caixa acústica, com a pirâmide truncada, e o megafone com o tubo metálico, e o tubo acústico, a conexão, e a disposição geral de todos e cada uma das peças, como acima descritas; a adaptabilidade do aparelho para microtelefonia, receber ou transmitir a voz ou a música pela reflexão do som como descrevi.

Eu pretendo usar a grelha a qual eu coloco em frente do receptor como parte da Patente, porque a experiência tem me ensinado que ela materialmente melhora a nitidez do som recebido.

Assim como o "harmônico", eu desejo apenas assegurar o privilégio exclusivo do uso de várias peças que se ajustam, para produzir efeitos harmônicos ou o som da sirene. Este harmônico está abaixo da patente pendente, e não tenho feito mudança considerável. De acordo, eu espero que você bondosamente atenda com astúcia este assunto, junto com ...

A presente comunicação é independente de alguma coisa no que concerne minhas aplicações para patentes do telefone e do telégrafo sem fio, as quais permanecem sujeito a patente pendente e podem ser assuntos (objetos) de subsequentes aplicações.

R. Landell de Moura

Washington, 26 de maio de 1902.

Para Mrs. Munn & Co.