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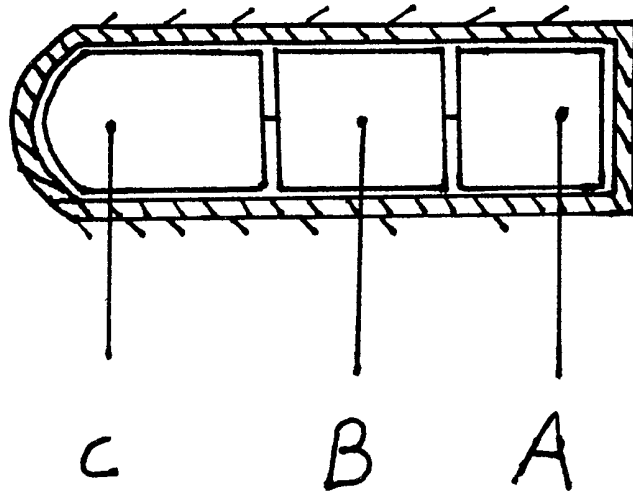
(56) Documents cited
 GB 1577023 WO A1 84/01688 US 4262632
 GB 1171611 WO A1 84/00869

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 Selected US specifications from IPC sub-classes G09F
 H04B A01K

(54) Electronic identification ear implant

Figure 2

(57) An electronic ear implant for identification of wild and domestic animals is inserted under the skin of the ear with a syringe. It is held in place by between 10 and 500 spines to prevent removal. The implant comprises a metal, plastics, or silicone rubber tube housing a battery A, a radio-controlled switching timing device B, and a coded information electronic component connected to a short range transmitter C. When activated by an external radio frequency, the device is switched on and will transmit coded information indicating the herd number, individual animal number, year of birth and sex of animal. The information held within the implant will be transmitted up to 3 metres, for a duration of between 5 and 20 seconds, after which time the device will switch off. The timing device will then remain in an off-mode until reactivated by the external radio frequency.



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Figure 1

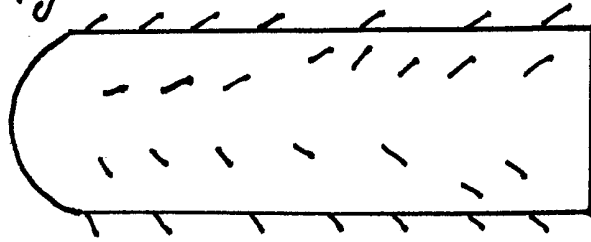
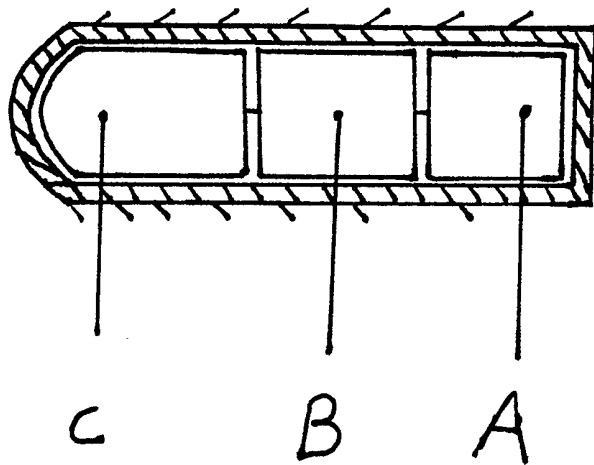


Figure 2



SPECIFICATION

Electronic identification ear implant

5 This invention relates to an electronic device as an ear implant into domestic and wild animals for the purpose of identification.

The implantation into the ear of plastic cartridges has been practised in the U.K. for several years. The principle use of the system has been to promote growth in farm animals by incorporating a hormonal substance. In addition the use of ear tags has been compulsory for several decades to identify the animal for government records.

This present invention relates to the use of a small electronic device which will be introduced as an ear implant into the animal. The electronic device when activated by an outside transmitter will send a signal which will identify the animal as an individual in the herd. The device is designed to permit identification up to a distance of 3 metres and includes a spined exterior to prevent removal.

25 A specific embodiment of the invention will now be described with reference to the accompanying drawings in which:—

Figure 1 shows the external view of the ear implant;

30 *Figure 2* shows the internal arrangement of the implant;

Referring to Fig. 1 the electronic identification ear implant is a small metal, plastic, or silicone rubber, tube whose dimensions do not exceed 8 cm in length and 3 cm in diameter. It has between 10 and 500 metal spines, 5 mm long protruding from the surface of the cylinder at an angle of between 20° and 50° relative to the long axis of the cylinder. The purpose of spines is that when introduced under the skin of the animals ear, with a suitable syringe, they will hold the device in place, so making the device permanent. The device is constructed to a smooth finish with a rounded point at the end to be introduced first into the animals ear.

Referring to Fig. 2 the internal arrangement of the electronic identification ear implant consists of three parts labelled A, B & C.

50 Part A. This refers to a power source in the form of a small long-life battery.

Part B. This refers to a radio-controlled switching mechanism which when activated by an outside radio frequency switches on the device for a period of between 5 and 20 seconds.

Part C. This refers to the coded information in micro-electronic components connected to a short range radio transmitter, a range of up to 3 metres.

65 On activation from a suitable hand held decoding machine, the ear implant is switched on for the 5 to 20 second period. During this time it will transmit the coded information incorporated into it. This will include the herd

number of the animal, the individual number of the animal and the year of birth and sex of the animal. The device will continue to repeat the information until the timing system stops the transmission. This can be for up to 20 seconds.

The system will then revert to its off mode until reactivated by the outside source.

75 CLAIMS

1. An electronic identification ear implant for use in domestic and wild animals which includes a power source, a timing device, a coded information electronic component and a short range transmitter.

2. As mentioned in the above claim 1 the timing device is switched on by an external radio frequency which then activates the device for a period of between 5 and 20 seconds.

3. In reference to claim 1 the coded information contained will refer to the animals herd number, individual animal number, year of birth and sex of animal.

90 4. In reference to claim 1 the short range transmitter will transmit the coded information up to a range of 3 metres.

5. The whole device is contained in a small cylindrical device no more than 8 cm in length and 2cm in diameter constructed in either metal, plastic, or silicone rubber materials.

6. The cylindrical device referred to in claim 5 will have between 10–500 spines of 5 mm in length protruding from the device at an angle of between 20° and 50° relative to the long axis of the cylinder.

7. The purpose of the spines described in claim 6 are to prevent the removal of the ear implant other than by means of surgery or destruction of the animals ear.