Oct. 4, 1960 F. O. PASCHALL 2,955,270

HONEYCOMB DETECTOR UNIT

Filed March 21, 1960

FIG. 1

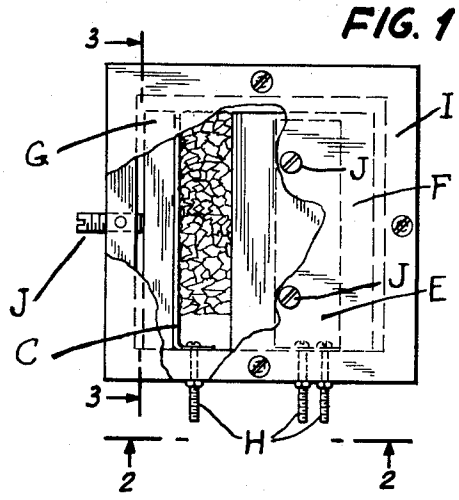


FIG. 2

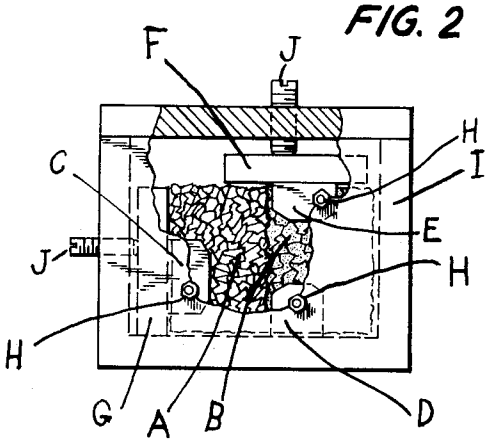
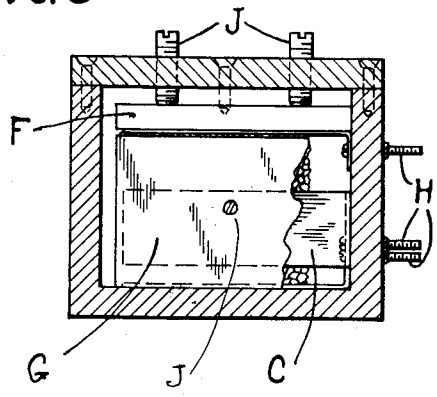


FIG. 3



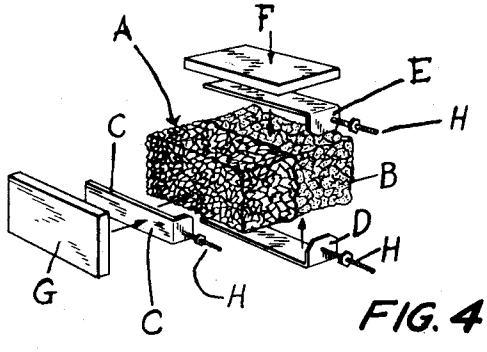


FIG. 4

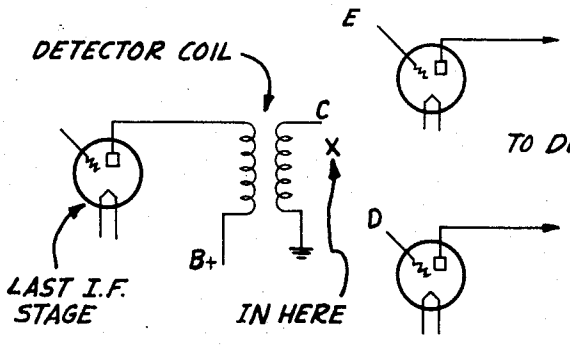


FIG. 5

INVENTOR.

Frederick O. Paschall

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HONEYCOMB DETECTOR UNIT

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1 Claim. (Cl. 338—100)

This invention relates to radio and television grid leaks and has as its main object the idea of establishing two "parade grounds" of large size composed of ground up pieces of coal and coke made into two sections and joined together with a suitable binder, the whole block being about 1½ inches in size, all over, more or less, according to capacity requirements and each side is flat and smooth, so that two, three or more very thin metal contact plates lie flat against the block's surfaces and are held in firm engagement by loose pieces of insulation placed on top of the top output plate and the input plate facing the front side of the block so that set screws can put pressure against them, which is sufficient pressure to hold all the elements under pressure against the block by the screws being threaded through the top and front side of the box in which it is housed.

The idea of the parade ground is that the two sections, the input one has up to around thirty thousand ohms resistance while the output one has practically none and this forms an ideal grid leak for real high fidelity.

The reason why such a low value of resistance produces such good results is the fact that the R.F. signal has been broken up and shunted into many channels of carbon in passing through the input section and when it hits the output section it is perfectly modulated and also amplified as it hits the control grids of the two detectors, due mainly to the size and almost perfect inductance of this output section of coke.

This unit is so perfectly balanced that no condenser is needed, such as other grid leaks need.

The kind of coal used in this unit has a resistance of from about three thousand to thirty thousand ohms resistance, due to its carbon content and this runs in veins all through the coal, some lines fast and some slower.

Coke is an excellent conductor of electric impulses and when it is ground up into small particles and mixed with the proper amount of coal particles for the output section the signals are built up into more solid notes and this is good for the heavy beat notes that make good high fidelity music, as it goes into two separate detector tubes and is amplified through two separate channels all the way to the speakers, and, due to the fact that this second section is so fast and one detector tube is fed from the top plate of the output section and the other detector tube fed from the bottom plate both of these plates have exactly the same ohmic readings this insures that the two channels will remain equal in volume.

Different capacities can be made in the unit by varying the amount of coke dust in the input section and by varying the size of the contact plates.

The units will average from about 3,000 to 10,000 ohms resistance between the input plate and the two output plates, and this is far less than the grid leaks heretofore have used, which ran from 100,000 to several million ohms and this high amount of resistance makes for sharp and high-pitched notes which have a tendency to cut off much of the beauty of the low notes desired in high fidelity.

This honeycomb unit does not need high resistance to modulate signals but does it in a new and improved manner.

The formula for the input section of the honeycomb is about three parts of coal particles to ½ part coke dust. The coke dust is to step up the coal's induction just a little. The output section is about three parts coke particles to one part coal particles. These are mixed, separately, with a suitable binder, and moulded into one block, under pressure.

There is nothing to get out of order and they will outlast the receiver.

This unit has no voltage value at all, hence it cannot conflict with semi-conductors or transistors both of which require battery operation.

To the accomplishment of the foregoing my invention consists of the elements and their relation one to the other, as herein particularly described and sought to be defined in the claim: reference being had to the accompanying drawings which show the preferred embodiment of my invention, and in which:

Fig. 4 shows all the elements in their set-up positions.

A is the input section and B the output section of the honeycomb block and they are joined directly together with a suitable binder.

C is the metal input plate which is pressed against A by a loose piece of insulation shown as G, so as to press the metal input plate firmly against the input section via a setscrew threaded through the front side of the box housing.

D is the bottom metal plate lying directly underneath B, the output section, and is connected to the grid of one detector tube.

E is the metal plate lying directly against the top of the output section and is connected to the grid of the other detector and this makes push-pull detectors.

F is a loose piece of insulation lying on top of E plate and is held in tight engagement by a setscrew which is threaded through the top of the box housing.

G is also a loose piece of insulation and it presses against the pickup plate C shown in Fig. 2 via a setscrew J which is threaded through the box housing on the front side.

H shows the setscrews to all three contact plates.

I shows the box housing which is made of Lucite, or such like, insulation.

Fig. 1 and Fig. 3 are cutaway views of little consequence.

Fig. 5 shows where this unit is placed in a receiver.

The detailed description of the preferred embodiment of this invention is not to be construed as limiting the scope of the invention, inasmuch as many variations may be made by those skilled in the art within the scope of the invention.

Having thus fully described the invention, what I claim as new and useful and desire to secure by Letters Patent, is:

A block composed of ground up particles of coal which has a carbon content, coke and coke dust made into two different degrees of resistance into two different sections with the two sections firmly glued together and the section having the higher resistance, with a metal contact plate pressing against its front side, being for the input and the other section, the output, has practically no resistance, but has two metal plates, one lying directly underneath it and the other lying directly on the top side of this section with all three contact plates having terminal means.

References Cited in the file of this patent

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