Sept. 11, 1934. M. H. BENEDEK 1,973,038

ELECTRICAL CONDENSER

Filed Sept. 7, 1933

Fig. 1.

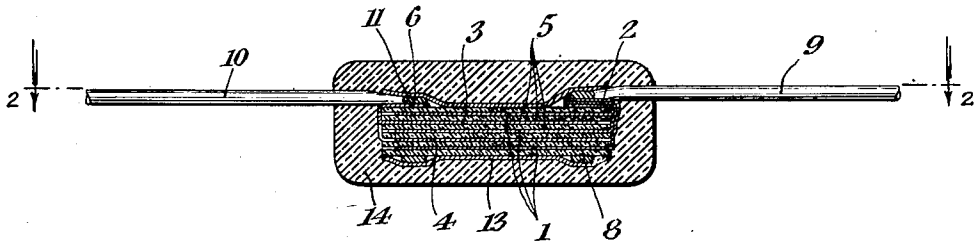


Fig. 2.

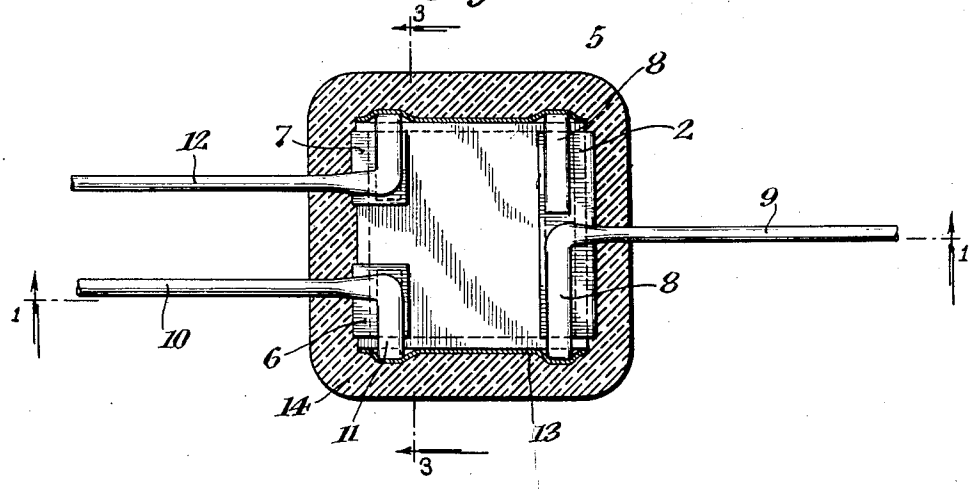
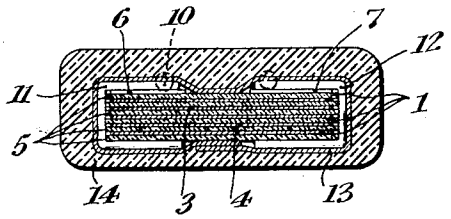


Fig. 3.



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ELECTRICAL CONDENSER

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2 Claims. (Cl. 175—41)

The invention relates to electrical condensers particularly of the types commonly used in radio receiving sets, which are of low capacity and frequently have to be kept within very narrow capacity limits, and aims to provide a wire terminal construction of simple and desirable nature. In certain of its aspects the invention relates more particularly to condensers having conducting sheets of more than two polarities, in which the wire terminals are coordinated with clamps which engage the condenser stack in the manner described more in detail hereinafter.

Further objects and advantages of the invention will be in part obvious and in part specifically pointed out in the description hereinafter contained which, taken in conjunction with the accompanying drawing, discloses a preferred embodiment thereof; such embodiment, however, is to be considered as merely illustrative of its principles.

In the drawing—

Fig. 1 is a longitudinal sectional view of a condenser constructed in accordance with the invention, the section being taken on the broken line 1—1 of Fig. 2 looking in the direction of the arrows.

Fig. 2 is a sectional view taken on the broken line 2—2 of Fig. 1 looking in the direction of the arrows, and

Fig. 3 is a section taken on the line 3—3 of Fig. 2 looking in the direction of the arrows.

The invention is illustrated as applied to a condenser having conducting sheets of three different polarities, the sheets 1 (Fig. 1) being of one polarity and being provided with terminal portions 2 which are turned over to lie on one face of the condenser stack, adjacent one edge of such face.

The conducting sheets 1 are interleaved alternately with any desired number of conducting sheets 3 of a certain polarity, and further sheets 4 of a third polarity, i. e., three sets of conducting sheets or armatures are provided which are insulated from each other by suitable dielectric sheets 5, which usually will be of mica, and the stack may be impregnated or treated in any desired manner.

The conducting sheet or sheets 3 are provided with terminal portions 6 which are turned over onto a face of the stack adjacent a different edge than the terminal portions 2 above mentioned, and likewise the conducting sheet or sheets 4 are provided with similar terminal portions 7 which are turned over onto a face of the stack at a point remote from the terminal portions 2 and 6. In the illustrated embodiment of the invention the terminal portions 6 and 7 are relatively narrow, and are folded over onto a face of the stack at an edge of the stack which is opposite the terminal portions 2, and the terminal portions 6 and 7 are located adjacent the opposite corners of such last mentioned edge.

A clamping member 8 may then be bent around the stack into electrical contact with the terminal portions 2, and a wire terminal 9 is electrically and mechanically connected to clamping member 8. The camping member 8 will be of stiff but bendable metal, adapted to hold the stack in proper position, and the wire terminal 9 will be stiff enough to support the condenser when so desired, but nevertheless sufficiently bendable to enable it to assume any desired shape or direction as may be needed under varying conditions of use.

As a specific desirable feature, the clamping member 8 may be formed integrally with the same wire that constitutes the terminal 9; Figs. 1 and 2 show such a construction and also show the part of the wire which forms the clamping member 8 as being flattened out to secure greater bearing area.

A similar wire terminal 10 is provided for the conducting sheet or sheets 3 and is associated with a clamping member 11 which contacts with the terminal portion 6, the clamping member 11 being of U-shape as appears most clearly in Fig. 3, so that it clamps the stack adjacent one corner.

Another wire terminal 12 is likewise associated with the conducting sheet or sheets 4, and contacts with the terminal portion 7 thereof, this member 12 clamping the stack adjacent another corner and the two clamps 11 and 12 while being properly spaced and insulated from each other; cooperating to afford sufficient bearing pressure for that part of the stack which is not clamped by member 8.

I prefer to surround the clamped stack with an insulating sleeve 13, which may be of paper and which I find to be important particularly in the higher range of capacities used in this type of condenser, for preventing leakage and gas formation.

The assembly above described is then surrounded with molded insulation 14 such as bakelite which may be applied in manner well known in the art. The interior conducting joints are thus effectively sealed by the insulation 14, which surrounds and effectively supports and

holds in proper position, the inner portions of the wire terminals 9, 10 and 14.

The resulting condenser is simple and economical in construction, adapts itself easily to the various mounting requirements, and the stack is securely held against changes in capacity.

While a specific embodiment of the invention has been disclosed it will be understood that changes may be made therein without departing from the main features of the invention as set forth in the appended claims.

1. An electrical condenser comprising a stack of dielectric sheets and conducting sheets of more than two polarities, conducting sheets of one polarity extending outwardly beyond one edge of the stack, a metallic clamping member electrically connected with said last mentioned conducting sheets adjacent said edge, said clamping member embracing areas of the stack adjacent said edge to hold the sheets in position, other conducting sheets of different polarities respectively extending beyond other edge portions of said stack, and metallic clamping members respectively electrically connected with said last mentioned conducting sheets and respectively embracing areas of the stack adjacent said last mentioned extending portions, said clamping members being insulated from each other and each having extending therefrom and electrically connected thereto, a wire terminal which is bendable but stiff enough to support the condenser in different positions, and insulating material surrounding said sheets and clamping members and the portions of said wire terminals adjacent thereto.

2. An electrical condenser comprising a stack of dielectric sheets and conducting sheets of three polarities, conducting sheets of one polarity having portions extending beyond one side edge of the stack and engaging a face of the stack, a metallic clamping member embracing the area of the stack adjacent said edge and contacting with said turned over portions of the conducting sheets, conducting sheets of the second and third polarities provided with portions extending beyond the opposite edge of the stack respectively adjacent the corners of said last mentioned edge and turned over on to a face of the stack, and metallic clamping members respectively embracing the areas of the stack respectively adjacent said last mentioned corners, and contacting respectively with said last mentioned turned over portions of the last mentioned conducting sheets, said clamping members being insulated from each other, and each having extending therefrom and electrically connected thereto, a wire terminal which is bendable but stiff enough to support the condenser in different positions and insulating material surrounding said sheets and clamping member and the portions of said wire terminals adjacent thereto.

MARTIN H. BENEDEK.