May 19, 1931. R. J. PARSONS 1,806,115

HEATER PORCELAIN

Filed March 12, 1929

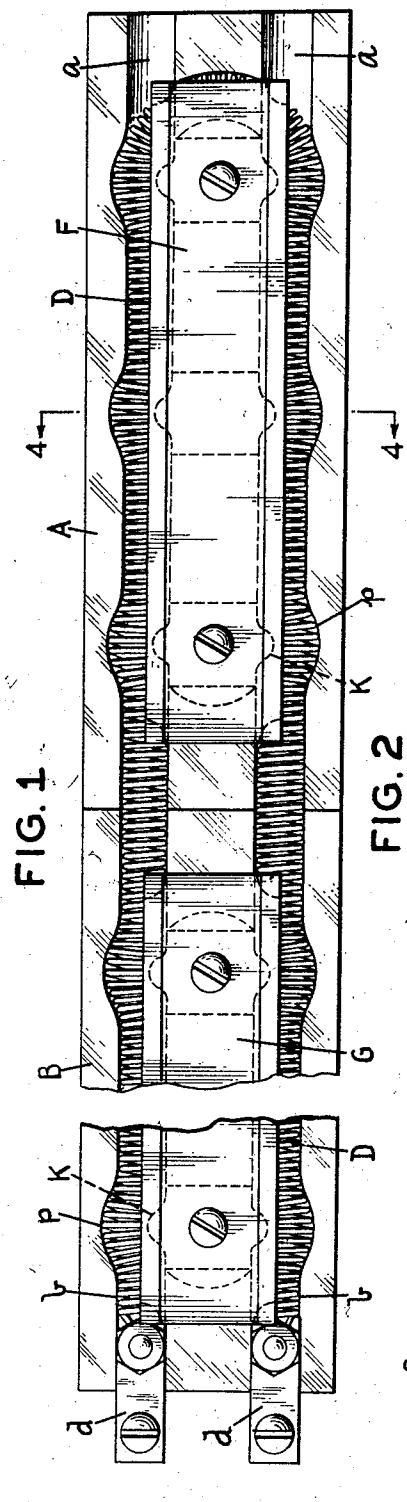


FIG. 1

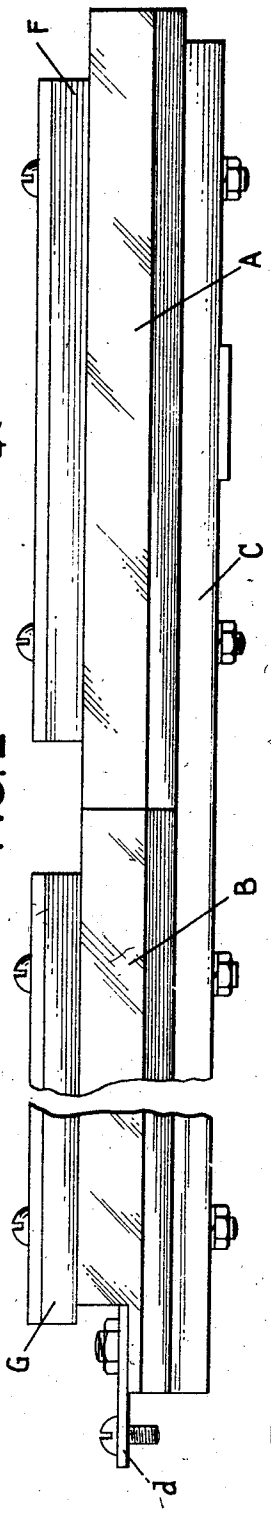


FIG. 2

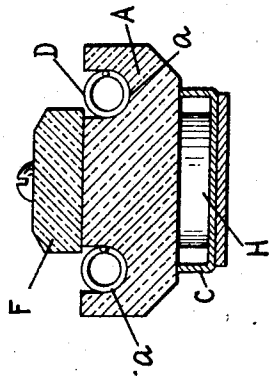


FIG. 4

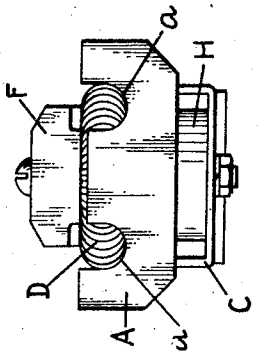


FIG. 3

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UNITED STATES PATENT OFFICE

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HEATER PORCELAIN

Application filed March 12, 1929. Serial No. 346,463.

For a detailed description of the present form of my invention, reference may be had to the following specification and to the accompanying drawings forming a part thereof, wherein

Fig. 1 is a plan of my device;

Fig. 2 is a side view thereof;

Fig. 3 is an end view and

Fig. 4 is a cross section on the line 4—4.

My invention relates to holders in the form of moulded blocks of insulation, usually porcelain, for electric coils that are liable to become hot, such as in electric heaters.

In brief I provide a base block on the face of which are one or more grooves provided at intervals with pinching spots, by virtue of which the wire coil laid in the groove will be securely held against vibration, while at the same time the coil as a whole will not be so covered that heat will accumulate under the cover and injure the coil. The coil is retained in the groove by means of a plate which partly overlies the groove and so prevents the escape of the coil therefrom but still maintains it exposed to the atmosphere.

Referring to the drawings, A and B represent two of the aforesaid retainer blocks, the two being placed end to end and both of them fastened to a metal underlying frame-bar C, as will be described in detail hereinafter. On the top face of blocks A and B are formed two parallel grooves, *a* and *b*, which may be more or less in number. In these grooves is laid a coil of resistance wire D at the ends of which coil are two terminals *d*, *d*. The middle of the coil is bent around in a curved cross-connecting groove at the outer end of block A. These grooves *a* and *b* are normally of a size to enclose the coil with enough looseness to permit a circulation of air around them. At intervals, however, the walls of the grooves are provided with pinching spots at which the coil is gripped and held against vibration, not only at the pinching spots but along the length of the coil between two succeeding spots. The spots I preferably make in the form of short sharp bends in the groove. Thus on one side of the groove is a projection K from the side wall of the groove and into it and opposite said projection, on the opposite side wall of the groove is a small recess *p*. Thus as the coil is laid in the groove it will have a short bend around outside of projection K and into the recess *p*. Thereby the coil will be rigidly held at the bend and thereby prevented from vibrating while the wire of the coil will not be so covered at the gripping or pinching points of the porcelain as to cause concentrated heating of the wire.

The retaining plates F and G are secured by means of screws, located, preferably at the pinching spots, which pass down through the plates and through the centre of blocks A and B, and finally through the metal frame-bar C, outside of which are nuts for the screws. On the under side of blocks A and B are integral lugs H that seat on the frame-bar C and surround the screws.

What I claim as new and desire to secure by Letters Patent is:

1. A holding block for resistance wire provided with a retaining groove for a wire coil, said groove having laterally offset bends at intervals, so as to provide pinching spots shaped to grip and prevent vibration of said coil.

2. A holding block for resistance wire formed in end to end sections provided with connecting grooves for receiving a coil of wire, said groves being provided with laterally offset bends at intervals, so as to provide pinching spots shaped to grip said coil and prevent vibration thereof and the sections being secured to a continuous underlying frame-bar.

3. A holding block for resistance wire provided with a surface groove for receiving a coil of wire, said groove having laterally offset bends at intervals, so as to provide pinching spots shaped to grip the coil and prevent vibration thereof and a retaining plate partly covering the groove to secure the coil therein.

4. The combination with a holding block for resistance wire provided with two parallel surface grooves connected across at one

end, of a coil in said grooves, said coil being continued through said cross connecting groove and providing with end terminals at the opposite end of the block, said grooves having laterally offset bends at intervals so as to provide pinching spots shaped to grip and prevent vibration of said coil.

Signed at Albany, county of Albany, State of New York, this 8th day of March, 1929.

ROBERT J. PARSONS.