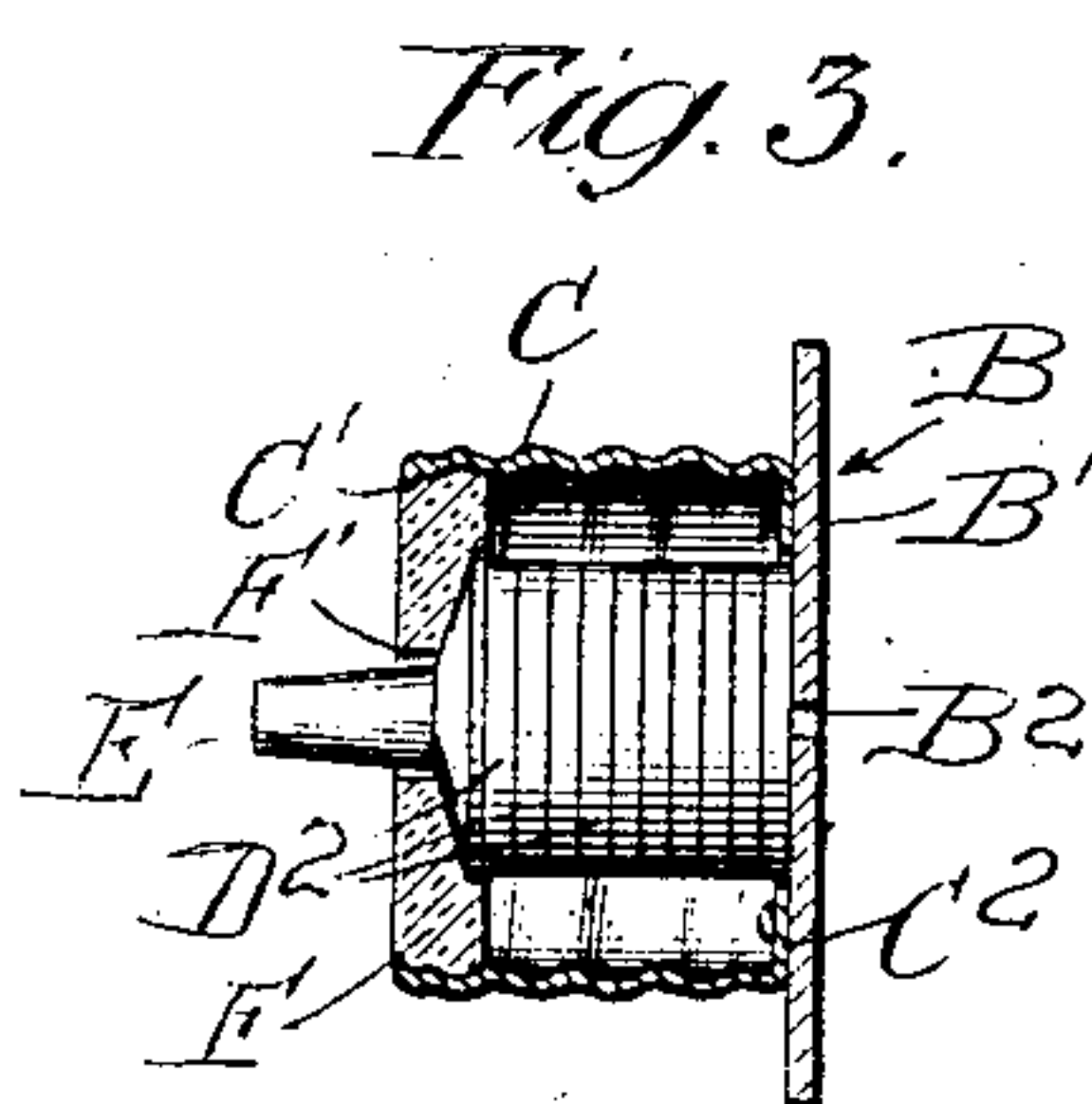
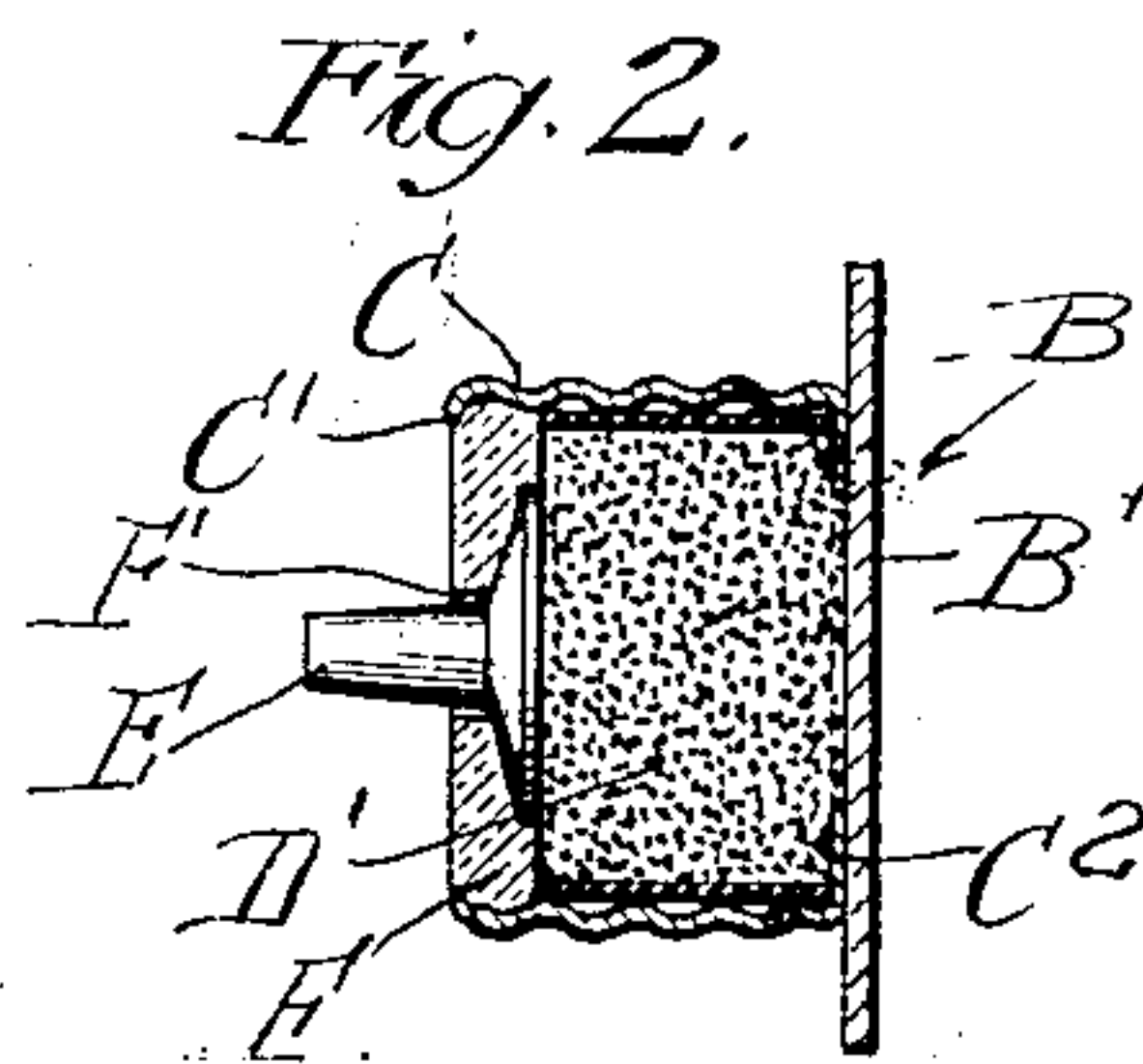
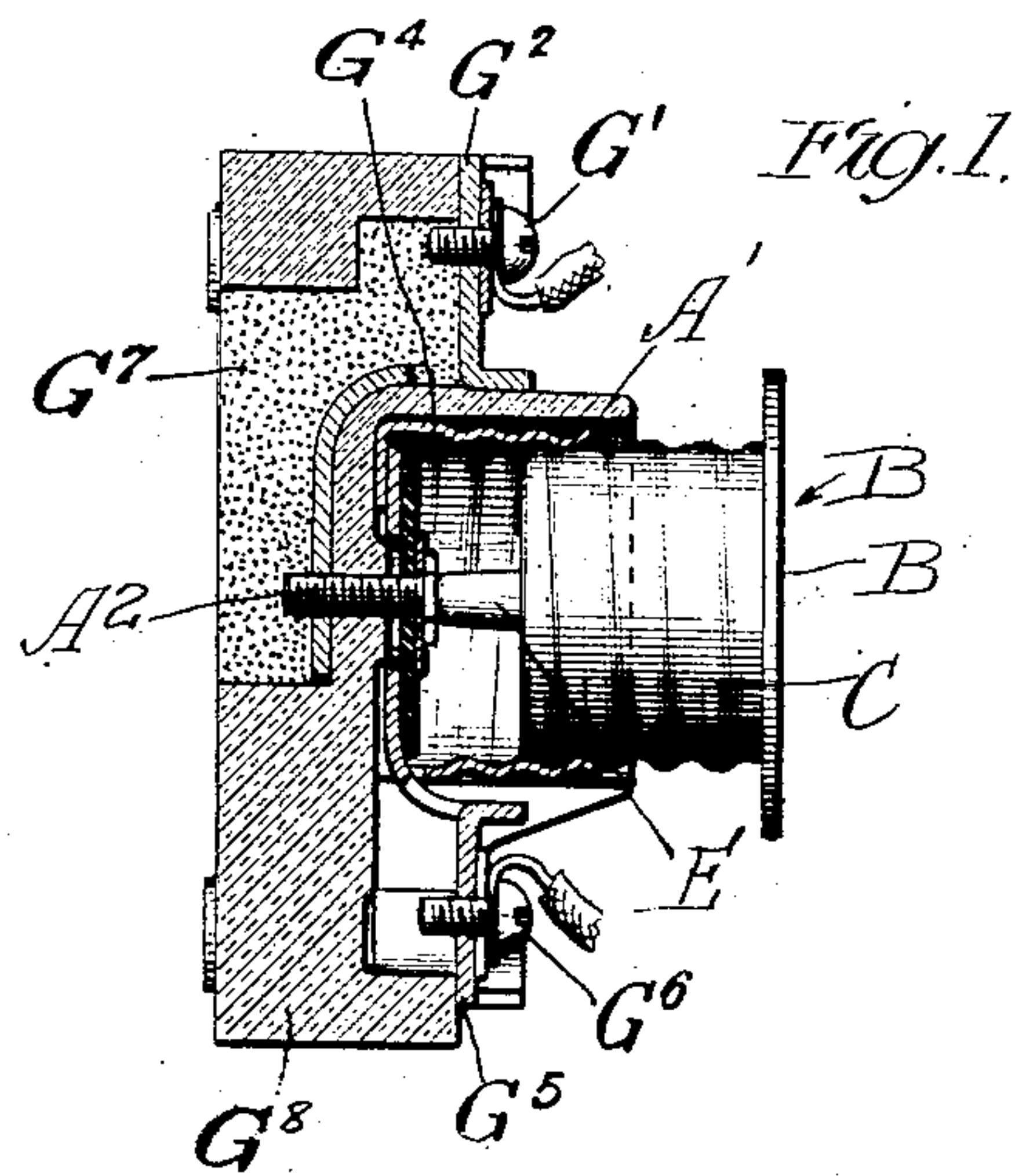


B. F. GARDNER.
ELECTRIC CONTROLLER PLUG.
APPLICATION FILED JULY 16, 1909.

969,265.

Patented Sept. 6, 1910.



Witnesses
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BENJAMIN FULTON GARDNER, OF CHICAGO, ILLINOIS.

ELECTRIC-CONTROLLER PLUG.

969,265.

Specification of Letters Patent.

Patented Sept. 6, 1910.

Application filed July 16, 1909. Serial No. 508,062.

To all whom it may concern:

Be it known that I, BENJAMIN FULTON GARDNER, a citizen of the United States, residing at Chicago, Cook county, Illinois, have invented certain new and novel Improvements in Electric-Controller Plugs, as set forth in the specification and drawings which follow and are a part hereof.

The purpose of my improved electric controller plug is to put into a neat, convenient and inexpensive form a device of that nature which can be used by doctors, dentists, and others for regulating a commercial current to adapt it to their needs in cauterizing, electrolysis, and in small illuminating instruments. To this end I have adopted the form of the well known screw type fuse plug wherein the fuse wire is replaced with resistance material. The resistance can be varied by screwing the resistance plug into any receptacle, for instance into a lamp socket, a fuse cut-out block or any receptacle which will admit a fuse plug of the same type. The central contact point of my improved controller plug is movable and the screw pressure causes it to make the resistance material more compact, thereby increasing the conductivity and cutting out resistance. This resistance material, which is inclosed in the screw shell, may be in a powdered form, granular form, or in disk form. In either event the resistance is varied by screwing the plug into the receptacle.

The drawings and specifications attached will make the explanation more readily understood by persons skilled in the art.

In the drawings, Figure 1 is a sectional view of a fuse block with the electric controller plug shown in elevation. Figs. 2 and 3 are sectional views, showing modifications of the resistance material.

In Fig. 1, G^1 is a binding screw; G^2 is a metal part connected by screw thread to the binding screw G^1 , and also to A^2 and A^3 . These parts connected by screw thread, conduct the current to the resistance plug. G^4 is a metal shell threaded on the interior; G^5 is a metal part connected to the shell, G^4 ; G^6 is a binding screw threaded into G^5 ; G^7 is insulating material; G^8 a porcelain base.

In Fig. 1, B. is the metallic cover of the controller plug. B^1 is an insulating material on the metallic cover.

B^2 in Fig. 3 is a small hole in the cover

B for the purpose of allowing gas, which may accumulate, to escape.

C in Figs. 1, 2, 3, is a view of the screw threaded shell, which is attached to the cover B. at C^2 in Figs. 2 and 3.

C^1 in Figs. 2 and 3 is suitable insulating material.

D^1 in Fig. 2 is a view of the resistance material in granular form; and D^2 in Fig. 3 is a view of the electric resistance material formed of disks built up to the height desired.

E in Figs. 1, 2 and 3, is a metallic electrode which is in contact with the central contact, A^2 , in Fig. 1, and conducts the current to the resistance material, D^1 , and D^2 .

F, in Figs. 2 and 3, is a solid insulator part made in the form of a porcelain button with a hole in the center of the button through which the part E may move up or down. This insulator button is supported by turning inward the edge of the screw shell C.

When my controller plug is inserted in a fuse block and the fuse block is connected in an electric circuit, said circuit is traced step by step through the various elements of the whole device as follows: In Fig. 1, G^1 is a binding screw to which the wire of the circuit is connected. This binding screw is screwed into the metal strip G^2 , which transmits the current to the central electrode part, A^2 ; the central electrode part E is in contact with the part A^2 and through these parts the current is transmitted to the resistance material D^1 , through which it passes to the cap B which is riveted at C^2 to the screw shell C which is in contact, through the screw threads, to the screw threaded shell G^4 of the fuse block, the part G^5 transmits the current from the screw shell G^4 to the binding screw G^6 to which the wire circuit is connected.

Having fully described my improved electric controller plug, what I claim and desire to secure by Letters Patent of the United States is:

1. In an electric controller plug a metallic screw threaded shell containing non-fusible electric resistance material, a movable metal part in direct contact with said non-fusible resistance material, suitable insulating material between said screw shell and said non-fusible resistance material and suitable insu-

lating material between said movable metal part and said screw shell.

2. In an electric controller plug a metallic screw threaded shell, a metallic cover in direct contact with said screw shell, non-fusible electric resistance material within said shell in direct contact with said metal cover, a movable metal part in direct contact with said non-fusible resistance material, suitable insulating material between said screw shell and said non-fusible electric resistance material and means for insulating said movable metal part from said screw threaded shell.

3. In an electric controller plug non-fusible compressible resistance material within a screw threaded metal case, a movable metal electrode in direct contact with said resistance material, means to insulate said movable metal electrode from said case and suitable electric insulating material between the

said resistance material and the walls of said case, the metal cover of said case in direct contact with said resistance material.

4. In an improved electric controller plug non-fusible compressible electric resistance material within a screw threaded metallic case, a hole in the cover of said case, insulating material on the exterior of said case cover, said resistance material in direct contact with the interior of said cover, means to compress said resistance material, and suitable electric insulating material between the inner walls of said metal case and said resistance material and means to electrically insulate the movable metal electrode from said screw threaded case.

BENJAMIN FULTON GARDNER.

Witnesses:

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