

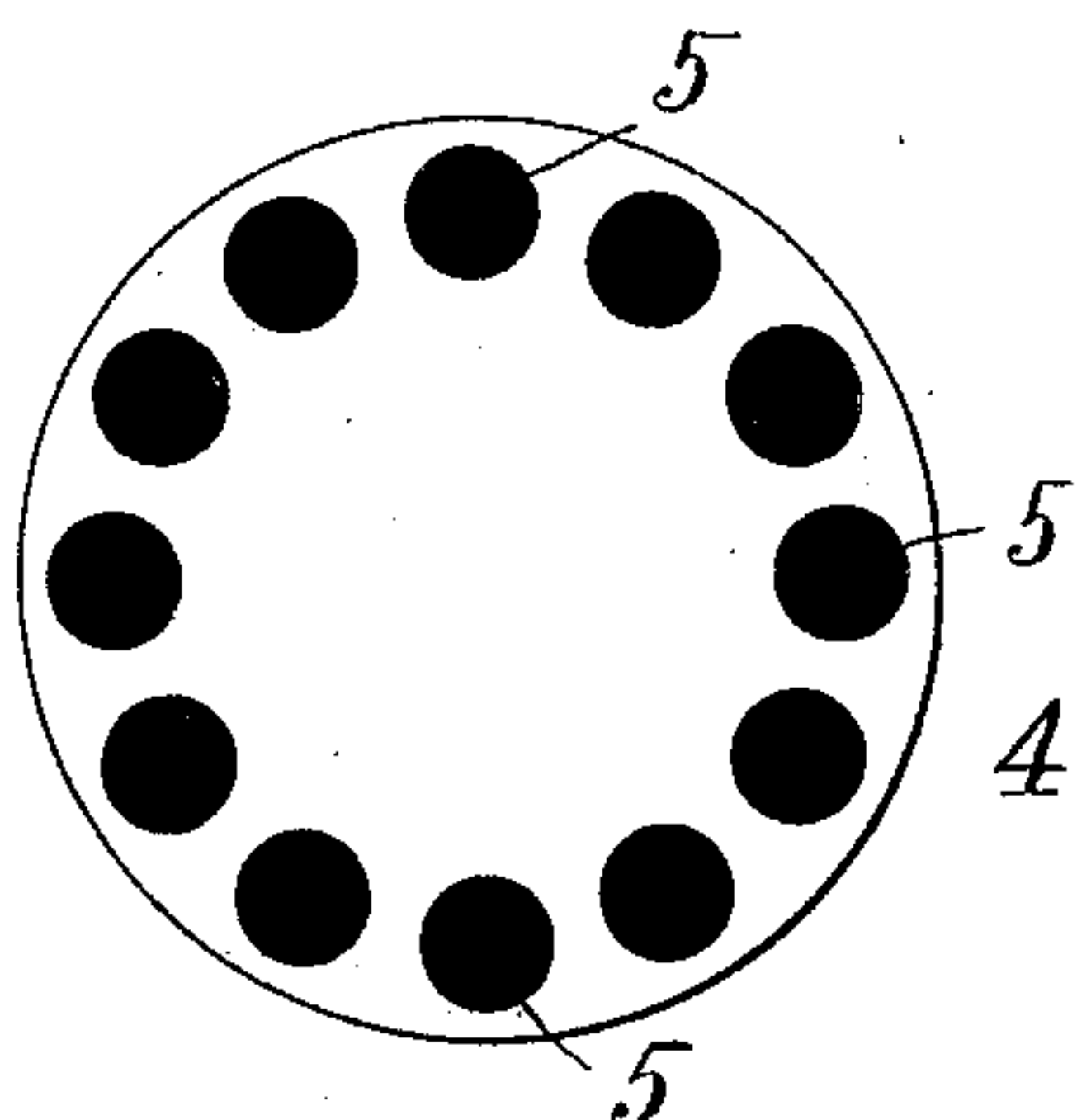
(Model.)

D. McF. MOORE.  
CIRCUIT INTERRUPTER.

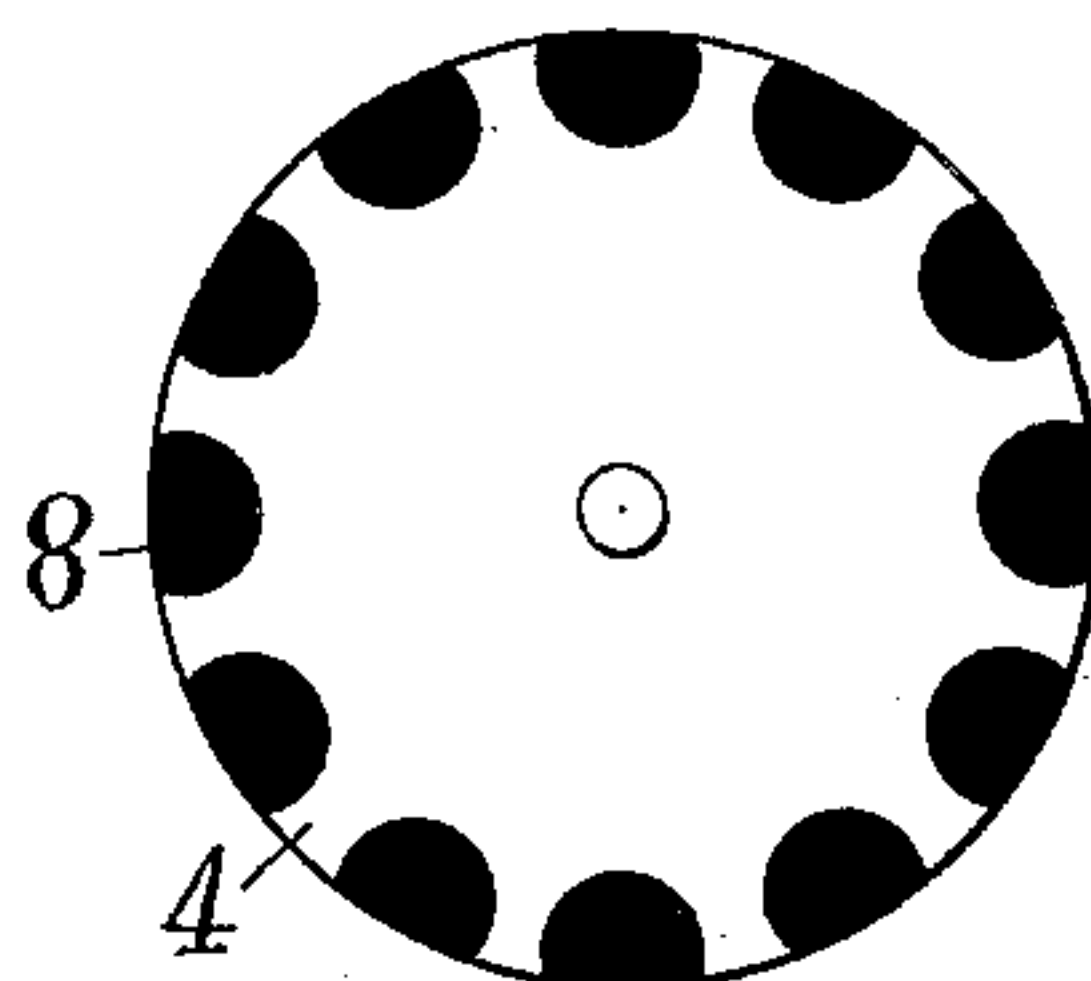
No. 604,688.

Patented May 24, 1898.

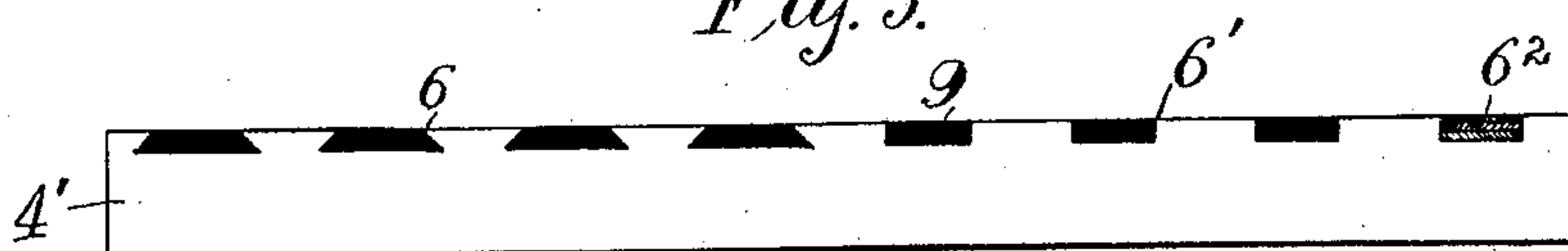
*Fig. 1.*



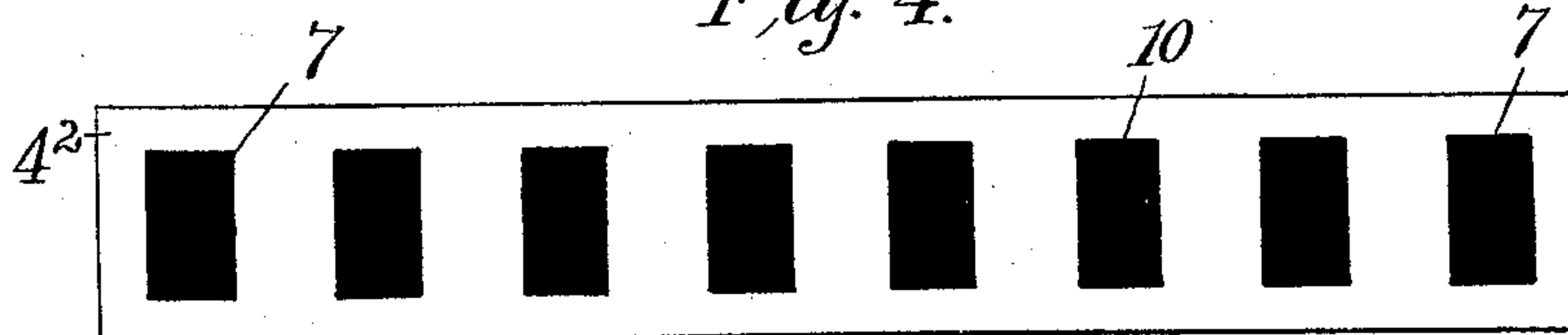
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

DANIEL MCFARLAN MOORE, OF NEWARK, NEW JERSEY.

## CIRCUIT-INTERRUPTER.

SPECIFICATION forming part of Letters Patent No. 604,688, dated May 24, 1898.

Application filed September 10, 1897. Serial No. 651,176. (Model.)

*To all whom it may concern:*

Be it known that I, DANIEL MCFARLAN MOORE, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented a certain new and useful Circuit-Interrupter, of which the following is a specification.

This invention relates to circuit-interrupting devices or appliances, and particularly to such devices designed for use in the lighting systems which form the subject of patents already granted me and to applications for patents now pending.

One object of the invention is the construction of a circuit-interrupter in a manner such that it will have a perfectly smooth hard surface.

Another object is a construction which will allow the use of vitreous insulating material whose adhesion to the metal part of the interrupter may be intimately insured by fusing it therewith.

With these ends in view the invention consists in the construction and formation of a circuit-interrupter substantially as herein-after fully described, and set forth in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 represents the metallic foundation of a circuit-interrupting wheel embodying this invention. Fig. 2 illustrates the finished wheel. Figs. 3 and 4 represent circuit-interrupters of modified form and construction.

Various kinds of vitreous material may be used in carrying out this invention; but that found to be best adapted for the purpose is porcelain. To secure the desired intimacy of adhesion between the porcelain and metallic foundation, it is necessary to fuse the porcelain to the metal or "fire" it thereon. This may be accomplished by depositing the porcelain upon the metal in any of the well-known ways or by placing sections or pieces of porcelain in suitable apertures or recesses in the metal and fusing it thereto. The former method is the one preferred, and in practicing it one or more layers of porcelain may be deposited in succession and the layers fused or fired successively into intimate connection with the metal and with the preceding layer

in any of the ways now practiced in coating metal with a vitreous substance.

The metal foundation for the reception of the porcelain may be prepared in various ways, as by boring cylindrical holes in the foundation 4, as indicated at 5 in Fig. 1, or by planing grooves in the metallic foundation 4', as indicated at 6 6' in Fig. 3, or by casting or stamping depressions in the face of the metallic foundation 4<sup>2</sup>, as indicated at 7 in Fig. 4.

In the foundation as prepared in Figs. 1 and 3 the porcelain may be located either by depositing it within the spaces prepared for it or by the insertion of pieces or sections ground or otherwise formed to fit the apertures or channels provided therefor.

In the construction of foundation illustrated in Fig. 4 the porcelain is best located by depositing it in the depressions made for it. In the location of the porcelain by depositing, the sections may be built up in successive layers, as indicated at 6<sup>2</sup>.

After the sections of porcelain, as 8 9 10, have been located in the foundation by either method above specified and fused or fired the foundation may be planed, ground, or turned down in any suitable way, so as to expose the desired amount of surface of the porcelain, as in Fig. 2, or to smooth the surface of the foundation and the porcelain sections satisfactorily.

By the means of construction above set forth the intimacy of adhesion produced between the insulation and the metal is such as to absolutely prevent the nicking or roughening of the metal or insulation at the line of junction between the two, thereby insuring the maintenance of a smooth surface upon the circuit-interrupting wheel or strip.

The form and construction of circuit-interrupter and the location and shape of the sections of vitreous insulation may be varied from those above described without departing from the invention.

What I claim as my invention is—

1. A circuit-interrupting device consisting of a metallic foundation and sections of insulation formed from some vitreous substance located therein in suitable quantities and at the desired intervals, and having a



fused or fired connection with said foundation.

2. A circuit-interrupting device consisting of a metallic foundation and sections of porcelain which have a fused or fired connection with the metal.

3. A circuit-interrupter consisting of a metallic foundation provided with openings or depressions and successive layers of a vitreous insulating substance deposited therein and having a fused connection with the metal and the surface of the metal and insulation made level and smooth.

4. A circuit-interrupter consisting of a metallic foundation with sections of porcelain deposited therein and having a fused or

"fired" connection with the metal, the foundation being then ground or planed down to expose a portion of the porcelain sections.

5. A circuit-breaking wheel consisting of a cylinder of metal with plugs of porcelain deposited therein and having a fused or "fired" connection with the metal, the cylinder being turned or ground down to expose a portion of said plugs.

Signed at New York, in the county of New York and State of New York, this 20th day of August, A. D. 1897.

DANIEL MCFARLAN MOORE.

Witnesses:

WM. H. CAPEL,

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