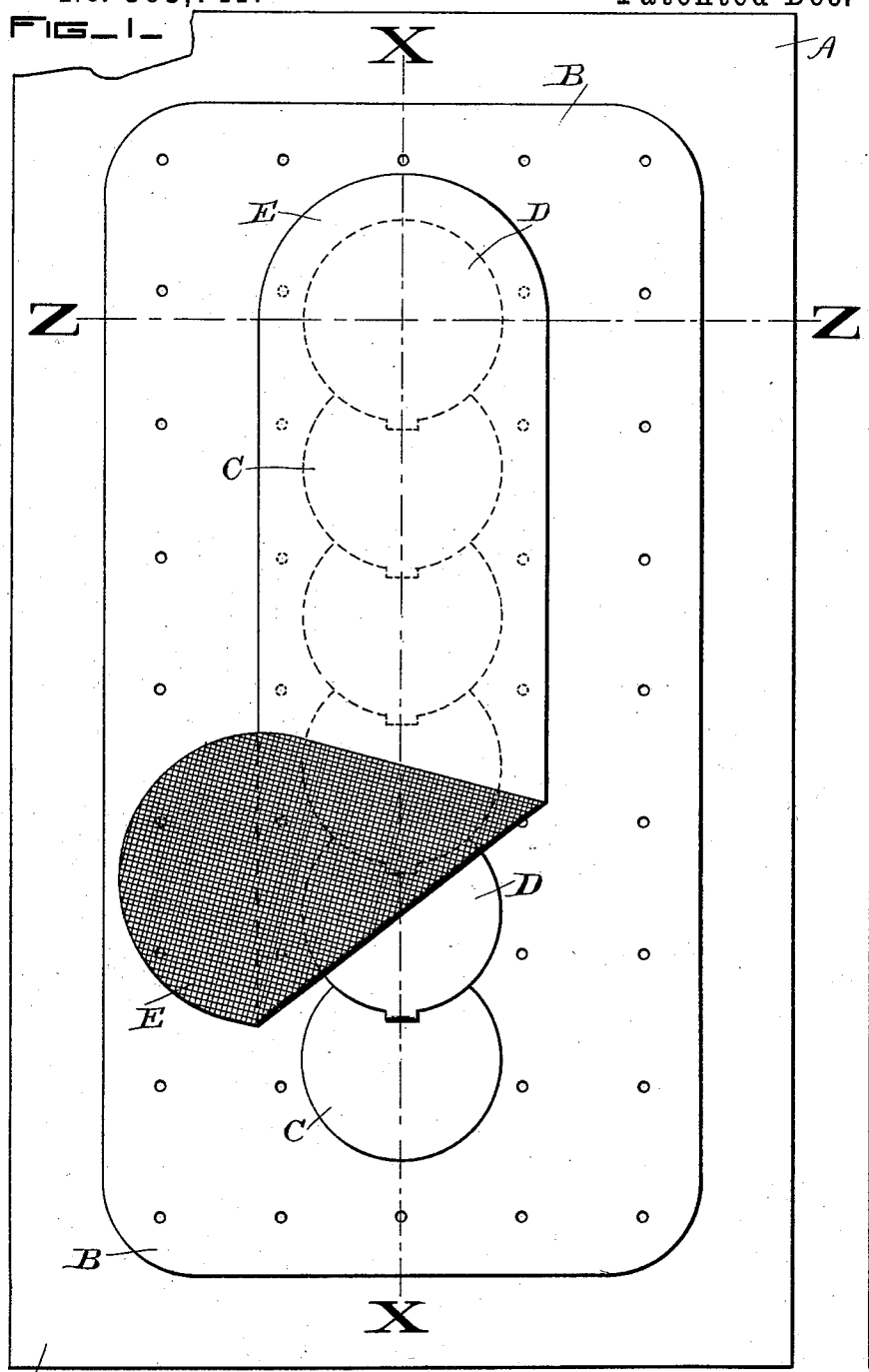
(No Model.)

# W. C. COLLINS.

## VOLTAIC PLASTER.

No. 393,741. Patented Dec. 4, 1888.

FIG. 1.



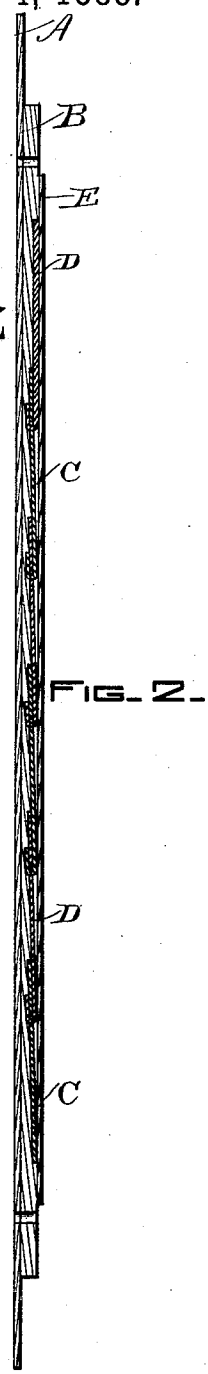




FIG. 2.




FIG. 3.

WITNESSES.
Eugene Humphrey.
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Willard C. Collins.
per T. W. Porter Atty.

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# UNITED STATES PATENT OFFICE.

WILLARD C. COLLINS, OF BUCKSPORT, MAINE.

## VOLTAIC PLASTER.

SPECIFICATION forming part of Letters Patent No. 393,741, dated December 4, 1888.

Application filed September 3, 1888. Serial No. 284,457. (No specimens.)

*To all whom it may concern:*

Be it known that I, WILLARD C. COLLINS, of Bucksport, in the county of Hancock and State of Maine, have invented a new and useful Improvement in Voltaic Plasters, which will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claim.

In said drawings, Figure 1 is a plan view of the operative face of a plaster embodying my invention. Fig. 2 is a section on line X X, Fig. 1, enlarged, the better to show the respective parts. Fig. 3 is a section on line Z Z, Fig. 1, all enlarged for clearness.

This invention relates to that class or kind of plasters that are described in United States Letters Patent No. 116,562, issued to me on the 4th day of July, 1871; and it consists in the feature of novelty hereinafter described, and pointed out in the claim.

As a brief preliminary statement, it may be said that, owing to the sensitiveness of the skin of many persons, an annoying irritation, oftentimes resulting in eruptions or sores, is caused by wearing voltaic plasters with the metallic plates exposed and next the skin, and to obviate this objection and at the same time allow the exuding fluid of the body to be in contact with said plates is the object accomplished by the invention next to be explained.

Referring again to said drawings, A represents the body or backing of the plaster.

B is the adhesive material spread upon body A.

C represents the copper plates, and D the zinc plates, connected together and embedded in the plastic material B; and E is a curtain or covering of textile fabric that is placed over said metallic plates, and at one or both its edges is secured to the body or adhesive material of the plaster. This curtain will be taken from fabric woven from threads of proper fineness or coarseness, and with the requisite interstices between the threads to allow the moisture of the body to have the requisite free contact with the plates, to thereby produce the desired voltaic action. By thus constituting the plaster the metal plates are by the curtain E kept from direct contact with the body of the wearer, thereby preventing the irritating effect which direct contact will in some cases produce, and yet by such filling of the fiber and spaces in the curtain with moisture a contact between the plates and body almost equal in extent to the area of the plates is effected.

It will be obvious that thin finely-perforated material—such as chamois-skin—may be substituted for woven fabric as a curtain or cover for the plates; but I prefer such fabric, as it constitutes a thoroughly-saturated thin body or layer between the plates and skin in perfect contact with both, and thus while but slightly reducing the voltaic action from what it would be if the plates were not covered, yet preventing the objectionable effect in any case of their being in direct contact with the skin.

The body A may be of thin leather, cloth, or other material, and the adhesive material may be of any desired kind, and while I prefer to form the voltaic plates of copper and zinc, yet other metals may be employed, and, as stated, the curtain E may at both edges be secured to the plaster, or at but one edge, and it may be so secured by adhesion or by stitches or otherwise.

I claim as my invention—

The improved voltaic plaster herein described, having the metallic plates arranged upon the operative side or face thereof, and a curtain of permeable material arranged to cover said plates, substantially as specified.

WILLARD C. COLLINS.

Witnesses:
A. W. HANCOCK,
S. C. COLLINS.