

No. 842,526.

PATENTED JAN. 29, 1907.

C. M. CLARKE.
INSULATING MATERIAL.
APPLICATION FILED FEB. 12, 1906.

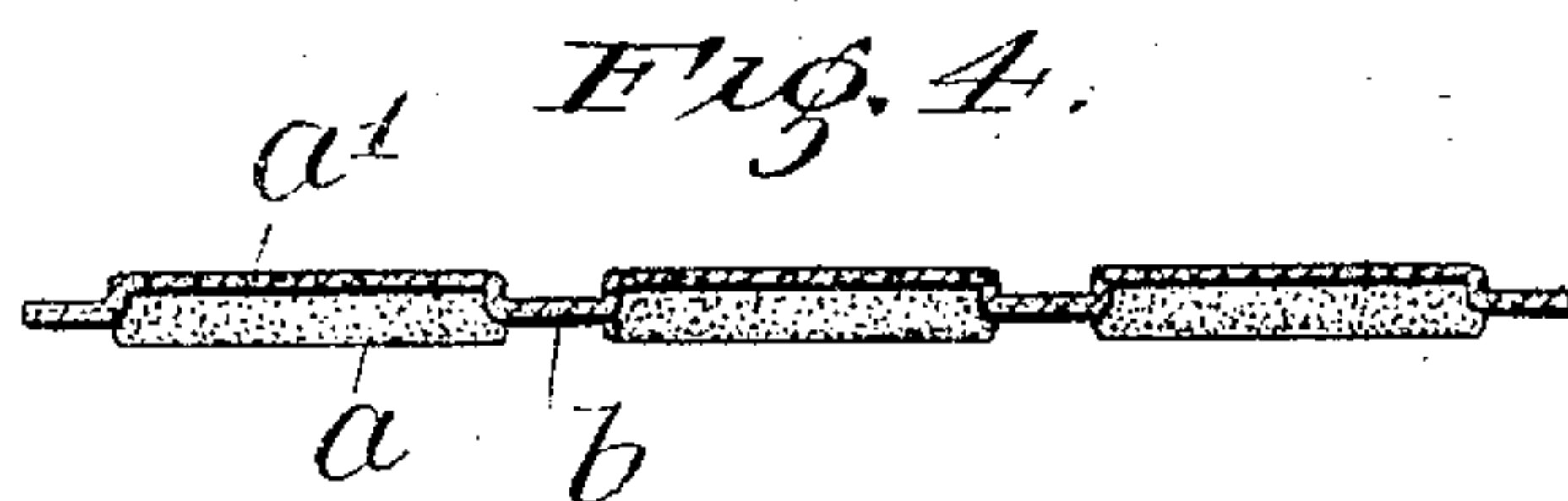
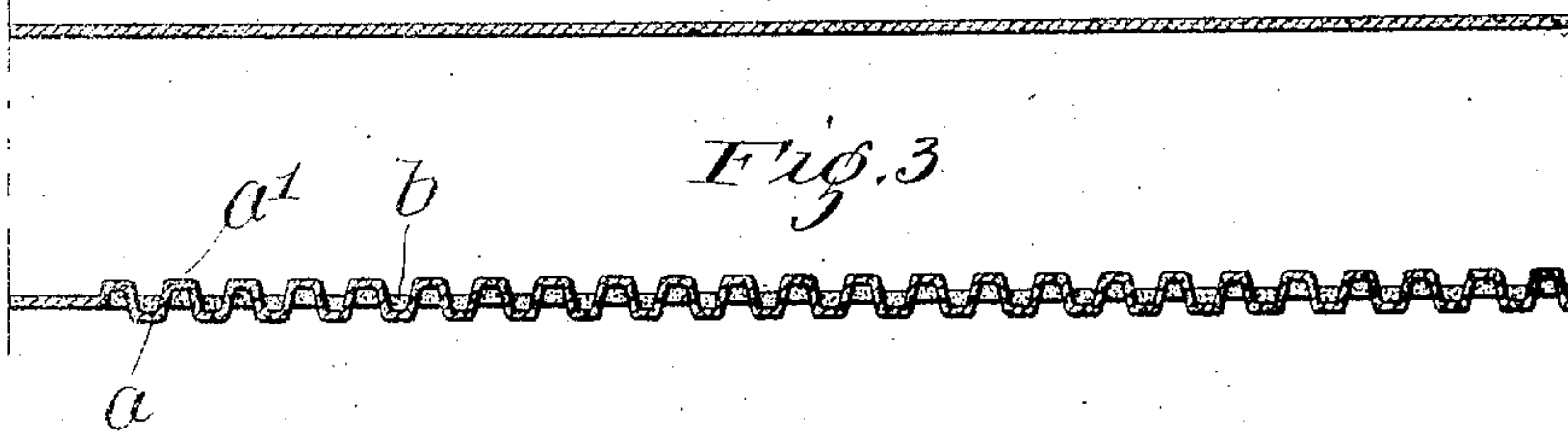
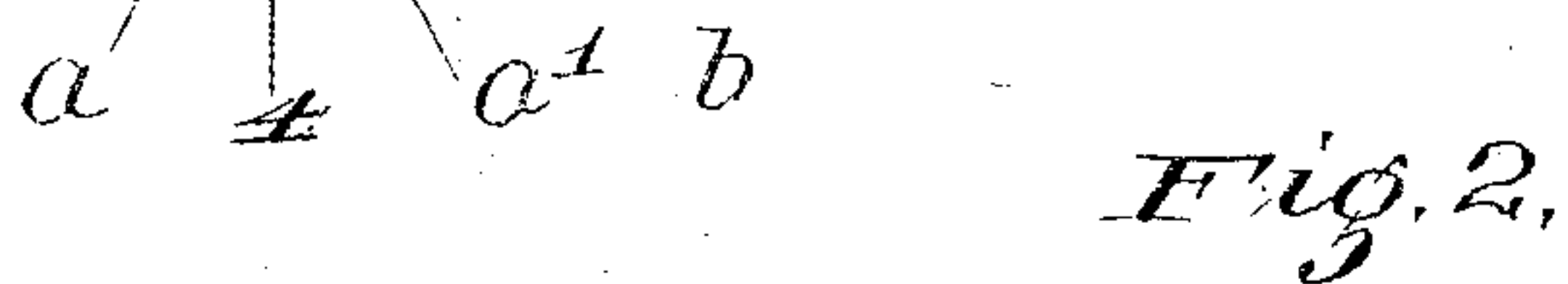
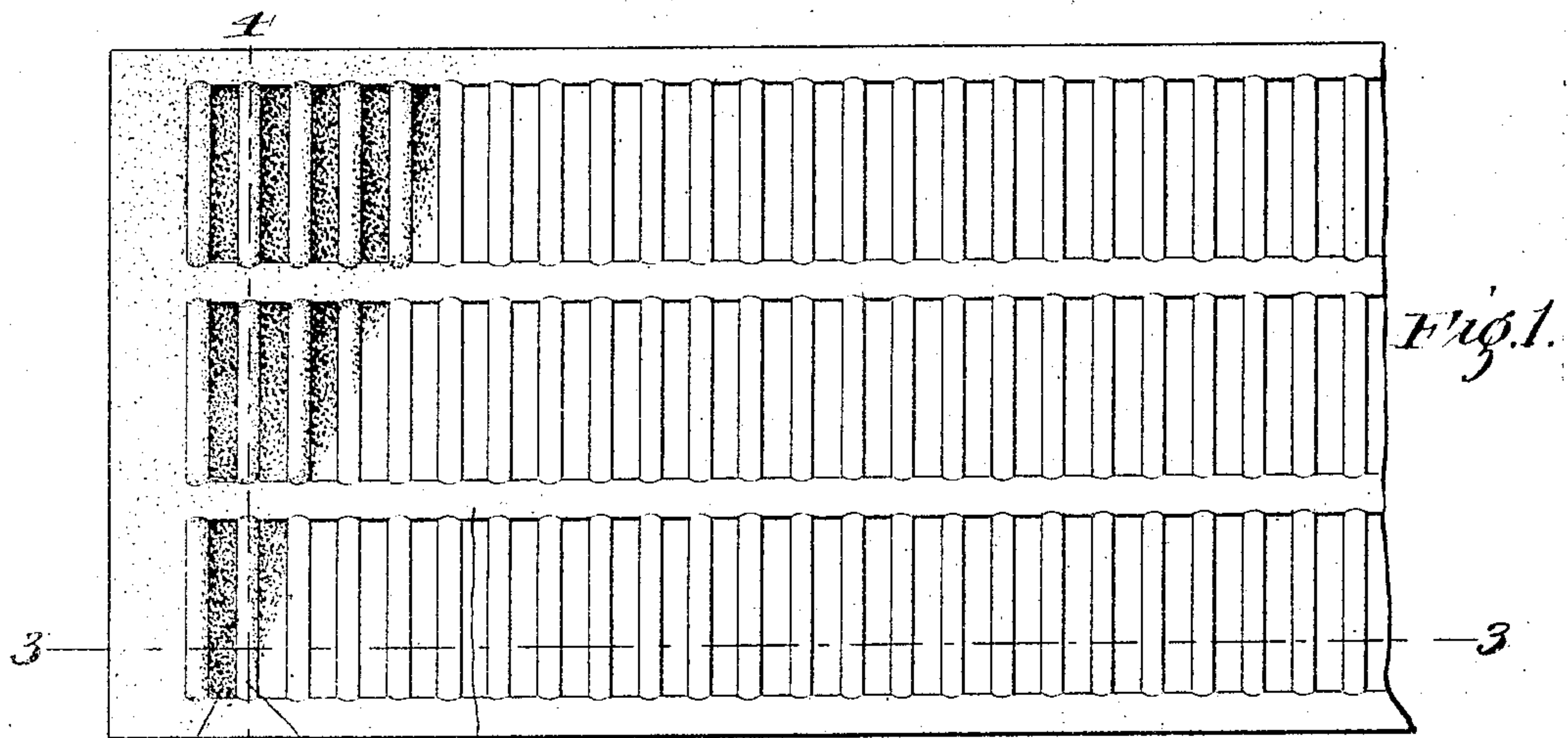
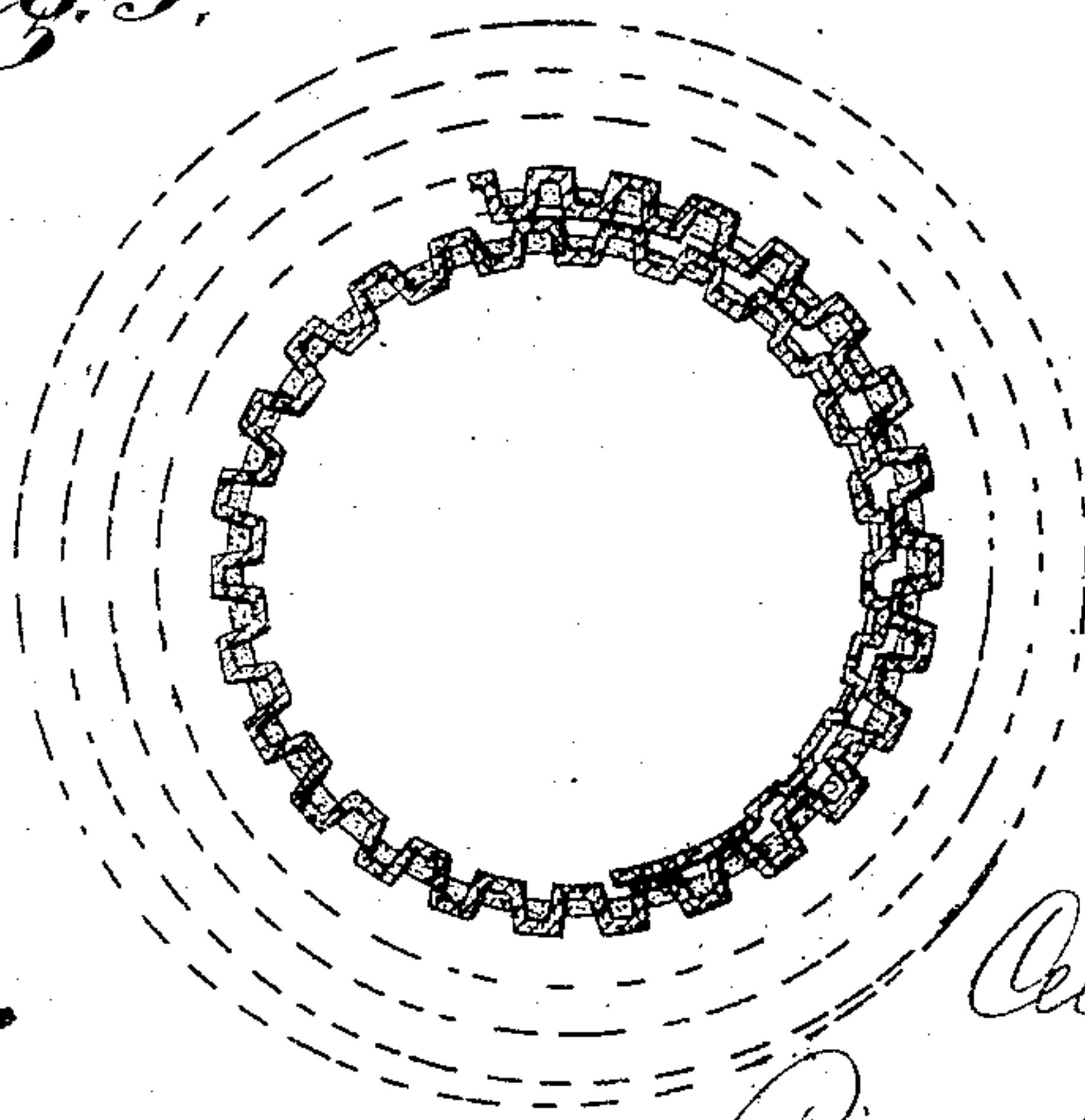


Fig. 5.



Witnesses:
H. M. Cornwall.
J. E. Sherry.

Inventor:
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UNITED STATES PATENT OFFICE.

CECIL M. CLARKE, OF CHICAGO, ILLINOIS.

INSULATING MATERIAL.

No. 842,526.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed February 12, 1906. Serial No. 300,898.

To all whom it may concern:

Be it known that I, CECIL M. CLARKE, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Insulating Material, of which the following is a specification.

My invention relates to improvements in insulating material, and is fully described and explained in this specification and shown in the accompanying drawings, in which—

Figure 1 is an elevation of a sheet of my improved material. Fig. 2 is a section through the material before it is operated upon in accordance with my invention. Fig. 3 is a section in the line 3 3 of Fig. 2. Fig. 4 is a section in the line 4 4 of Fig. 1, and Fig. 5 is a transverse section showing one of the ways in which the material is used.

Referring to the drawings, it will be seen that my improved material is made in sheets the edges of which are flat. Between the edges of the sheets are a series of rows of alternating ridges and grooves which are expanded upward and downward from the original flat material of the sheet. These rows are separated by flat bands of material *b*. In the actual practice of forming these sheets I take a flat sheet of asbestos paper or felt, such as is in common use, and pass the same between intermeshing rolls which are formed with plain portions which permit the edges and the flat bands of the material to pass through without change, the rolls being fluted between the plain portions and spaced apart such a distance that the asbestos sheet is first expanded upward and downward to form the grooves and ridges and is then as it reaches the line connecting the center of the rolls firmly compressed to solidify and give firmness to the expanded portions.

The texture of the commonly-used asbestos paper or felt is such that no appreciable

expansion can be effected without disintegrating the material, and for this reason it is necessary not only to expand the material, but to compress it to give it firmness, which it would not otherwise possess. Even when compressed, as set forth, the material of the ridges and grooves is much more loose in texture than the original fabric, and this is advantageous in making an insulating material, because the substance thus acquires internal air-cells, which increase its insulating power without increasing its cost.

The finished material may be built up into layers or rolled up into tubes, as shown in Fig. 5, and it is then very useful as a heat-insulator for pipes, boilers, and the like and makes also a very good deafening material.

I realize that considerable variation is possible in the details of this construction without departing from the spirit of my invention, and I do not intend, therefore, to limit myself to the specific form herein shown and described.

I claim as new and desire to secure by Letters Patent—

1. A sheet of asbestos insulating material having an original flat portion and projections expanded in opposite directions therefrom of looser texture than the original sheet.

2. A sheet of asbestos insulating material having an original flat portion and projections expanded in opposite directions therefrom of looser texture than the original sheet, and of more compact texture than is the material when merely expanded.

In witness whereof I have signed the above application for Letters Patent, at Chicago, in the county of Cook and State of Illinois, this 8th day of February, A. D. 1906.

CECIL M. CLARKE.

Witnesses:

CLARENCE E. COOK,
NATHAN C. HESTON.