

No. 682,174.

Patented Sept. 10, 1901.

G. D. COLEMAN.

METHOD OF MAKING METALLIC SURFACE SHEATHING.

(Application filed Dec. 20, 1900.)

(No Model.)

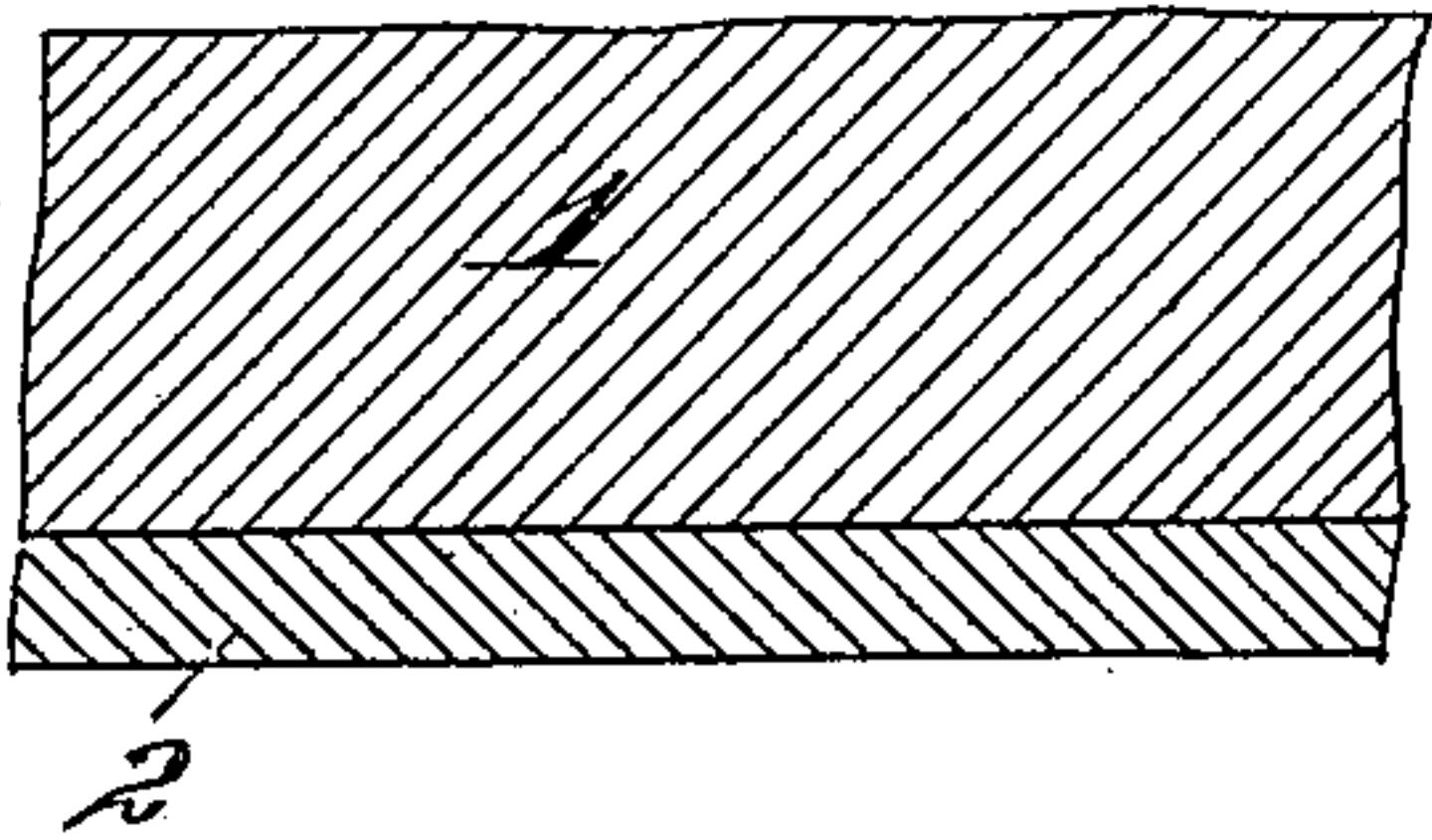


Fig. 1.

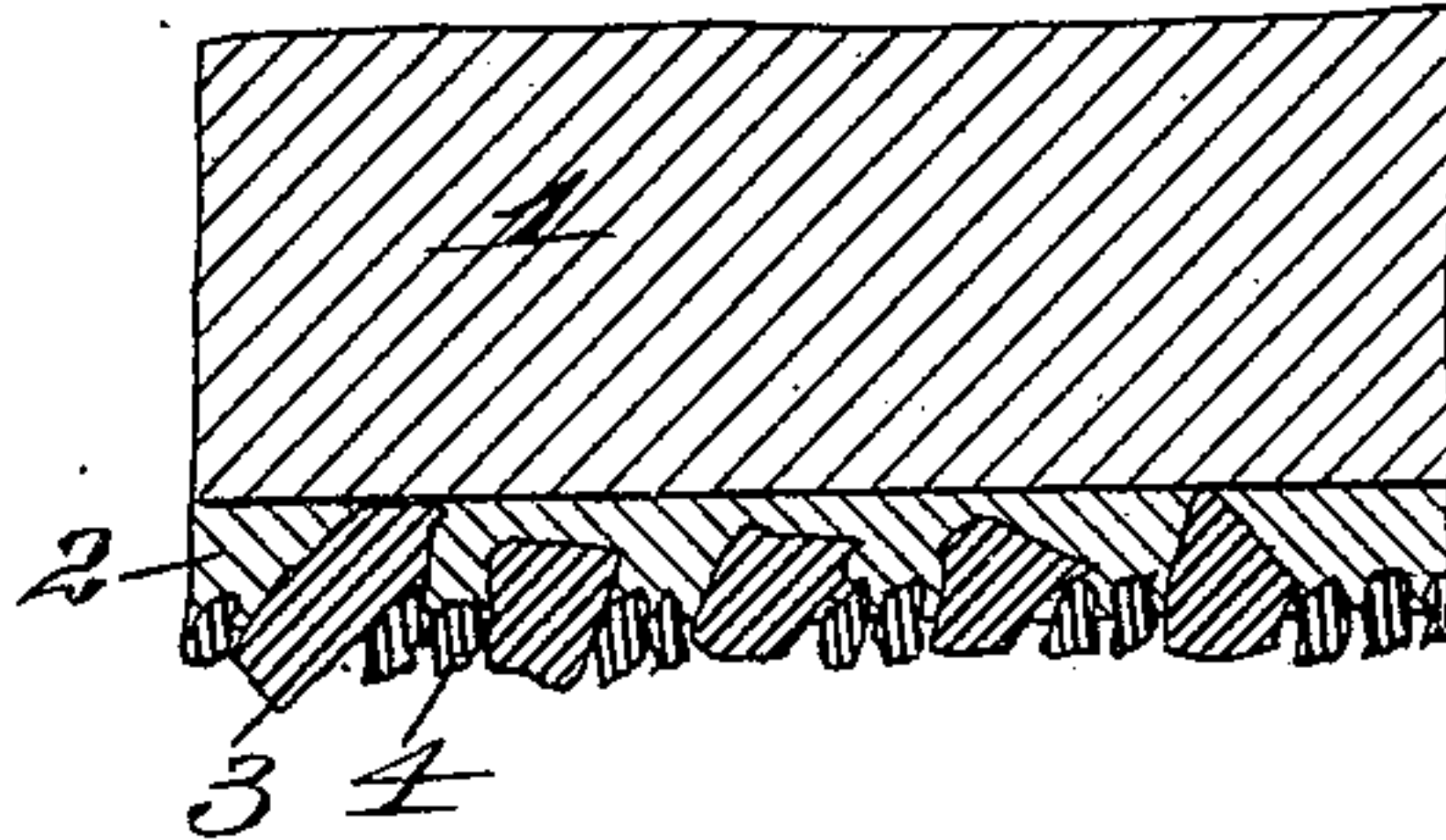


Fig. 3.

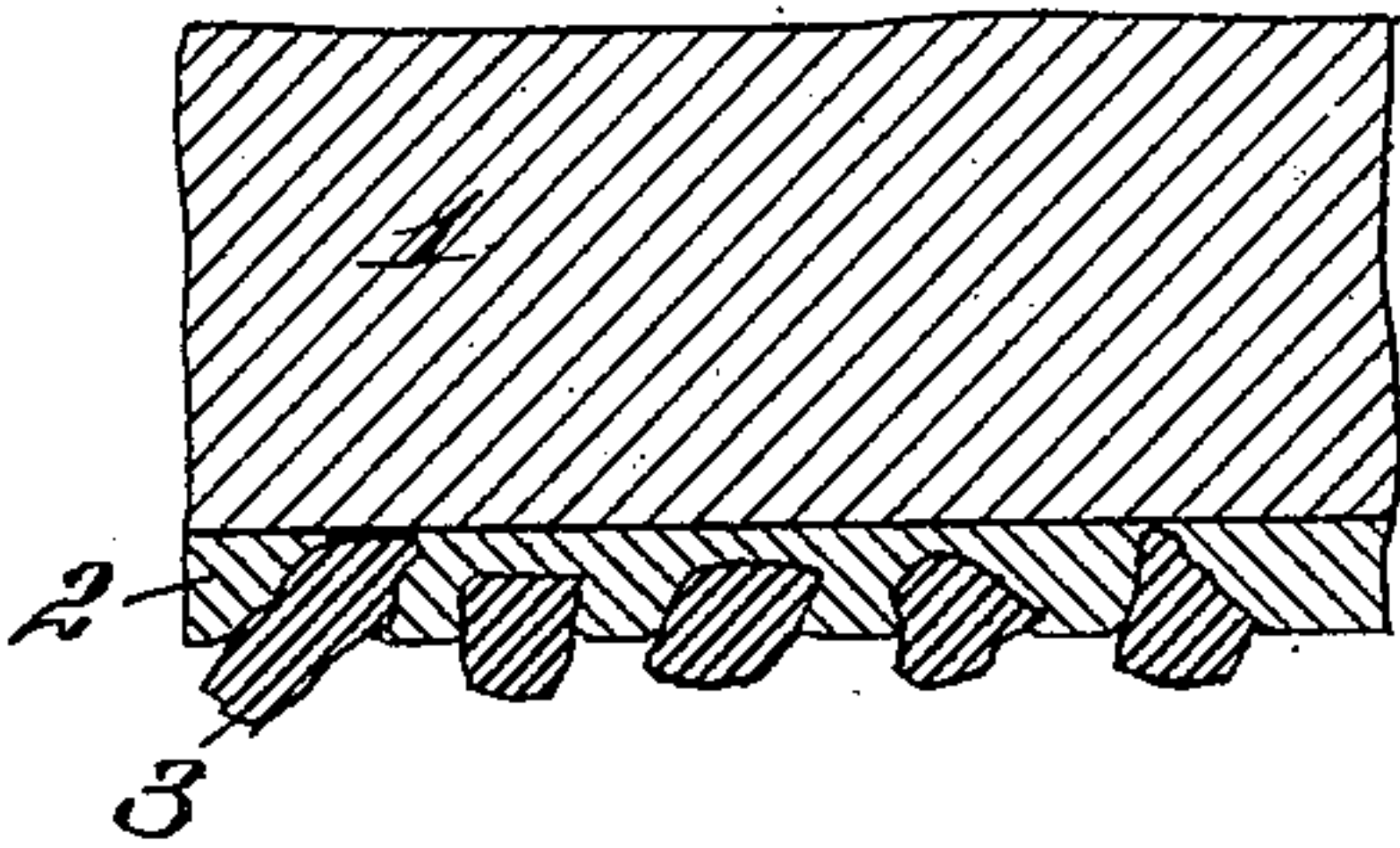


Fig. 2.

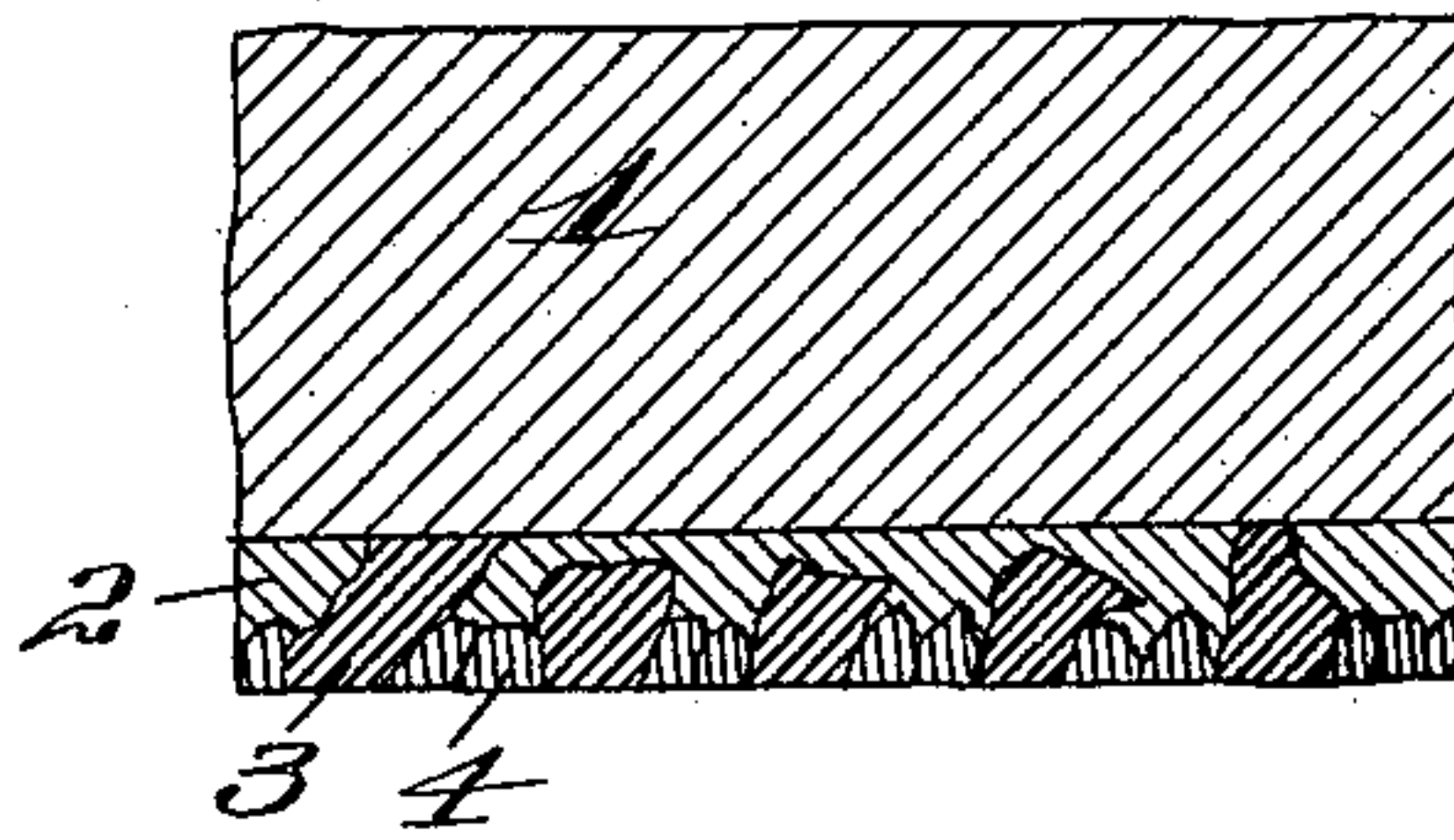


Fig. 4.

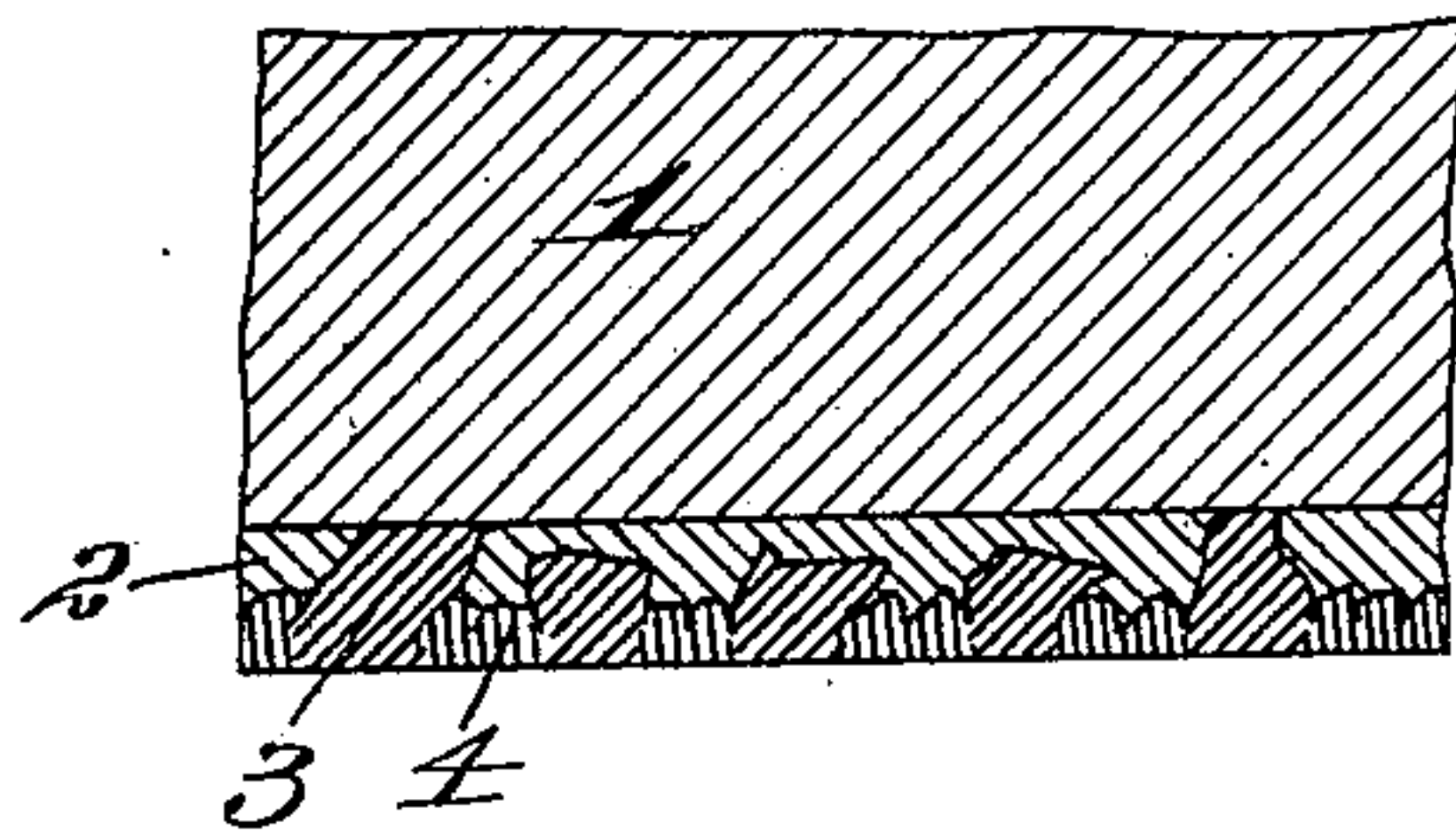


Fig. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE D. COLEMAN, OF BOSTON, MASSACHUSETTS.

METHOD OF MAKING METALLIC SURFACE-SHEATHING.

SPECIFICATION forming part of Letters Patent No. 682,174, dated September 10, 1901.

Application filed December 20, 1900. Serial No. 40,545. (No specimens.)

To all whom it may concern:

Be it known that I, GEORGE D. COLEMAN, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Methods of Making Metallic Surface-Sheathing; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to an improved method of making metallic surface-sheathing.

The object of my invention is to make a metallic surface-sheathing for use on structures exposed to the action of substances which would either attack the surface to be coated or be polluted or adulterated by the deterioration of such surface.

To the above end my invention consists in the improved method of making a metallic surface-sheathing hereinafter described and claimed.

In the accompanying drawings, illustrating my improved method of making metallic surface-sheathing, Figures 1, 2, 3, and 4 diagrammatically illustrate, in enlarged sections, successive stages in the process; and Fig. 5 diagrammatically illustrates, in enlarged section, the completed metallic surface-sheathing.

In carrying out my method of making metallic surface-sheathing I first cleanse, as by scraping and washing, the surface 1 to be sheathed. I then apply to said surface an adhesive viscous or semiliquid material 2, such as paint. The paint may be applied with a brush, or if the consistency be too thick it may be applied with a trowel or the like. I prefer for this purpose a paint, such as red lead mixed with a binder, such as oil, and a drier, such as turpentine; but any suitable compound may be employed for this purpose. This layer of material, which for the purposes of this application I term "paint," is then allowed to dry until it becomes tacky. To this tacky surface I then apply, by a blower or any other suitable means, granulated or comminuted metal or alloy 3, such as lead, so as to cause the particles of metal or alloy to adhere to the paint, being prefer-

ably partially embedded therein. Any metal or alloy may be employed for this purpose which is capable of being soldered. I then apply, by means of a blower or in any other suitable manner, finely-divided solder 4, which enters the interstices between the larger particles of granulated or comminuted metal or alloy and adheres to the surface of the paint. While I have used the word "solder" to define the finely-divided metal or alloy which I place in the interstices between the larger particles of granulated or comminuted metal or alloy, I desire it to be understood that I intend thereby to define any metal or alloy which is capable of acting as a solder with relation to the larger particles of metal or alloy to be united. I then hammer or roll the entire surface to bring the solder and the particles of metal or alloy into close contact, so that they may be united in the subsequent soldering process and also in order to remove the larger inequalities of the surface. I do not consider it to be peremptorily necessary that the surface should be hammered or rolled; but I do consider it is desirable, as it serves to press the metal or alloy and the solder into close contact, so that they may readily be united by the subsequent soldering process and also because it removes the larger inequalities of the surface, due to variation in the size of the particles of metal or alloy. So, therefore, my invention in its broader aspect is not limited to the employment of this hammering or rolling or compressing step, although I prefer to employ this step for the reasons stated. The paint is now allowed to become thoroughly dry. Then to the surface of the larger and smaller particles of metal and solder is applied some sort of soldering fluid, such as muriate of zinc or any solution by which the surfaces of the particles of metal and solder are rendered susceptible of being united by the application of heat. The surface is now subjected to the action of heat, and this may be done in any suitable manner, such as by the use of a blast-lamp or the application of a hot soldering-iron to the surface in order to melt the surface of the solder and unite the particles of metal into a metallic sheathing, which will then cover the entire surface to be sheathed. This method is particularly

useful in making the metallic surface-sheathing described and claimed in my copending application executed of even date herewith, Serial No. 40,544.

5 Having thus described my invention, I claim as new and desire to secure by Letters Patent of the United States—

10 1. The method of making metallic surface-sheathing which consists in applying to the surface to be covered a layer of paint, in applying to the surface of the layer of paint particles of granulated or comminuted metal or alloy, and in uniting the particles of metal or alloy by the application of heat, substan-
15 tially as described.

20 2. The method of making metallic surface-sheathing which consists in applying to the surface to be covered a layer of paint, in applying to the surface of the layer of paint particles of granulated or comminuted metal or alloy, in applying finely-divided solder to the interstices between the particles of metal

or alloy, and in uniting the particles of metal or alloy and solder by the application of heat, substantially as described. 25

3. The method of making metallic surface-sheathing which consists in applying to the surface to be covered a layer of paint, in applying to the surface of the layer of paint particles of granulated or comminuted metal or alloy, in applying finely-divided solder to the interstices between the particles of metal or alloy, in coating the particles of metal or alloy and solder with soldering fluid, and in uniting the particles of metal or alloy and solder by the application of heat, substan-
35 tially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE D. COLEMAN.

Witnesses:

HORACE VAN EVEREN,
ALFRED H. HILDRETH.