Dec. 22, 1925. 1,566,911

C. E. NELSON

METHOD OF APPLYING PROTECTIVE COATINGS

Filed Dec. 29, 1923

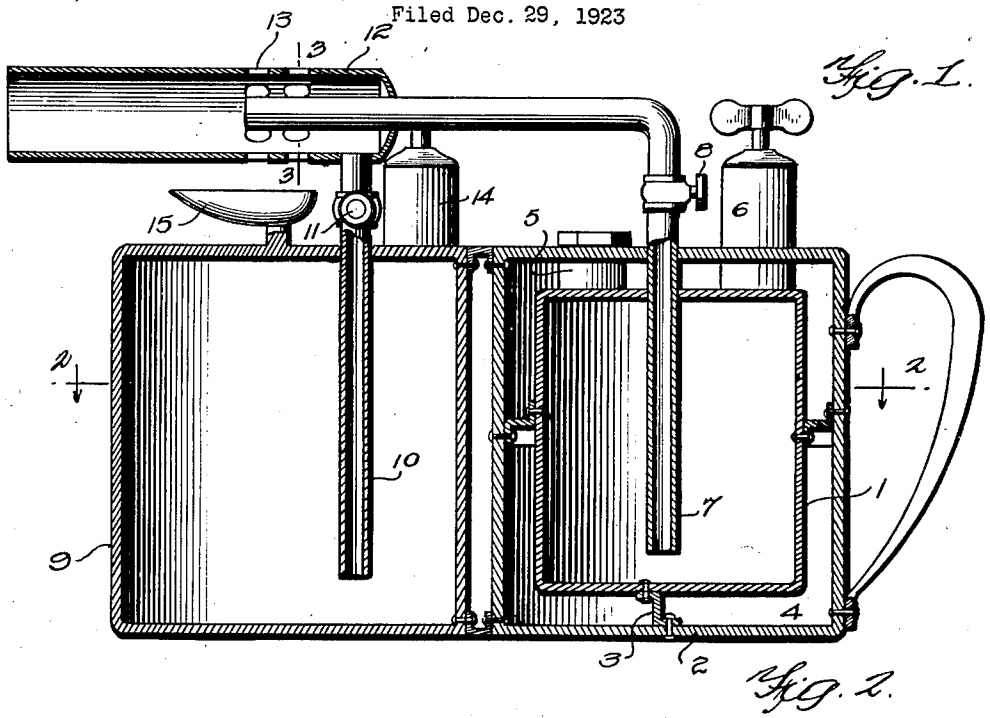


Fig. 1.

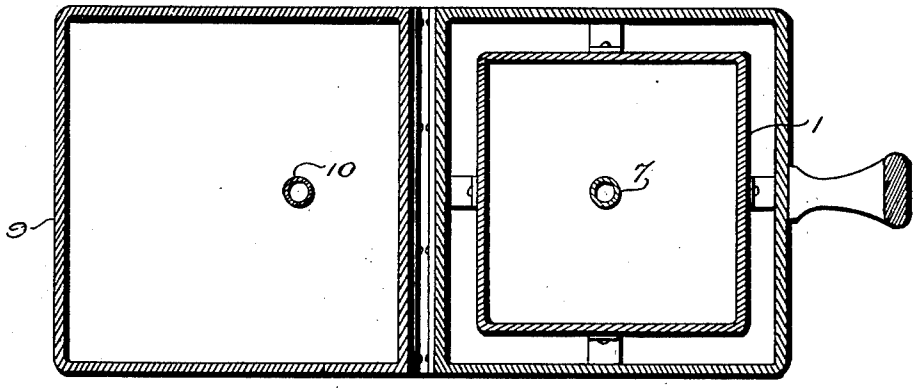


Fig. 2.

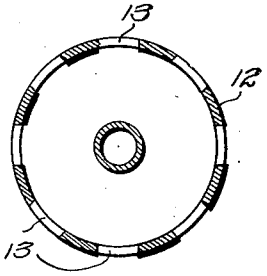


Fig. 3.

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UNITED STATES PATENT OFFICE.

CHARLES EDWIN NELSON, OF HAINES CITY, FLORIDA.

METHOD OF APPLYING PROTECTIVE COATINGS.

Application filed December 29, 1923. Serial No. 683,463.

To all whom it may concern:

Be it known that I, CHARLES E. NELSON, a citizen of the United States, residing at Haines City, in the county of Polk and State of Florida, have invented certain new and useful Improvements in Methods of Applying Protective Coatings, of which the following is a specification.

This invention relates to protective coatings, and methods of applying the same.

In the present invention, I form a protective coating for waterproofing and fireproofing and the like, by reducing glass to a fine powder, heating it to a temperature above its melting point, and applying it to the surface to be protected where it cools and solidifies.

The invention further comprises a process in which powdered glass is forced, by pressure, through a heating medium and sprayed on to the surface.

In the accompanying drawings, I have shown an apparatus particularly suitable for use in practicing the process. In this showing:

Figure 1 is a central vertical sectional view,

Figure 2 is a horizontal sectional view on line 2—2 of Figure 1, and,

Figure 3 is a sectional view on line 3—3 of Figure 1.

Referring to the drawings, the reference numeral 1 designates an inner receptacle mounted within an outer receptacle 2. The inner receptacle may be supported in the outer receptacle and spaced therefrom by means of suitable supporting members or brackets 3. This forms a space 4 surrounding the inner receptacle which may be heated. The inner receptacle is provided with an opening and a pipe or conduit 5 extends from this opening through the top of the outer receptacle to permit introduction of powdered glass. A pump 6 communicates with the inner receptacle to permit the material therein to be placed under pressure. The inner receptacle is provided with an outlet pipe 7, having a valve 8 arranged therein.

A second receptacle 9 is provided for the storage of gasoline, alcohol, or other volatile liquid fuel. This receptacle is provided with an outlet pipe 10 having a valve 11 and the outlet pipe extends into a sleeve 12. The sleeve is provided with perforations 13 forming a blow torch. The outlet pipe 7 also extends into this sleeve. The fuel receptacle may be provided with an air pump 14 and a priming cup 15.

In practicing the process, the glass is first ground to a fine powder and introduced into the inner receptacle. If desired, a pigment may be added to the ground glass to produce a coating of a desired color or colored glass may be ground and used in practicing the process. The pump 6 is operated to place the inner receptacle under pressure, and the burner lighted by forcing the air into the fuel container and opening the valve 11. When the glass employed has a high melting point, heat may be introduced into the chamber 4 to raise the temperature of the glass in the inner receptacle to a point slightly below its melting point. When the flame in the torch has become sufficiently hot, the valve 8 is opened, forcing the minute particles of glass under pressure, through the flame, which melts the powdered glass. The melted powdered glass is spread onto the surface and solidifies, forming a thin film or coating of glass, which serves as a fire, water, and moisture proof protective coating.

It is to be understood that the form of the invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

I claim:

The herein described method of coating articles with glass having a high melting point, which consists in producing a blow flame, preheating powdered glass to a temperature slightly below its melting point, feeding the preheated powdered glass under fluid pressure into the blow flame and in the direction of the travel thereof to form a stream of molten glass, and directing the stream of molten glass upon an article to form a coating thereon.

In testimony whereof I affix my signature.

CHARLES EDWIN NELSON.