

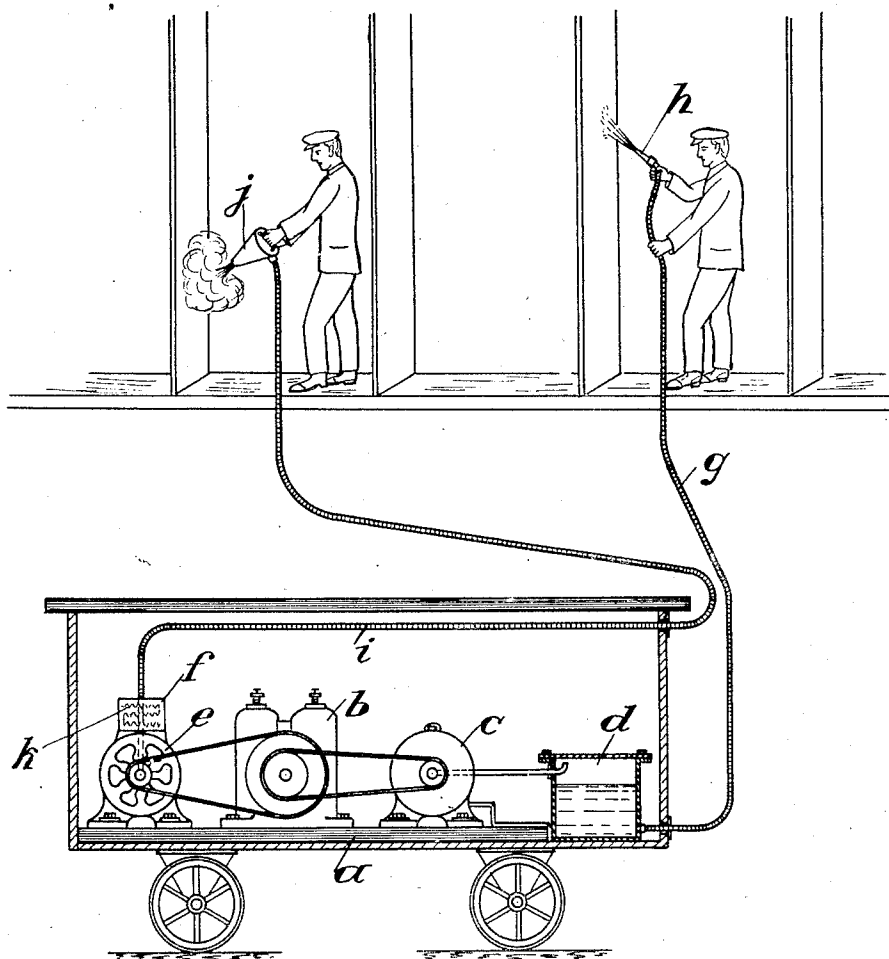
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METHOD OF COATING BODIES OF IRON, WOOD, OR OTHER MATERIAL

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METHOD OF COATING BODIES OF IRON, WOOD, OR OTHER MATERIAL

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My invention relates to improvements in the method of coating bodies of iron, wood or other material, and the object of the improvements is to provide a method by means of which such bodies may be provided with a weather-proof coat. With this object in view my invention consists in coating the said body with a suitable substance having high resistance to heat, such for example as a mixture or compound of metal salts and organic binding media formed into an ester with inorganic filling material, and heating the said coating by means of a portable apparatus for producing a current of hot air or other gas. Thus I am enabled to provide such bodies with a weather-proof coating, which by reason of their size or gravity cannot be treated in furnaces. I have found that a coating thus made is very durable, and that it is not removed from the body by atmospheric influences, so that it protects the body from the influences of the atmosphere, humidity, gases, acids and the like. Experiments made with a piece of iron coated according to my improved method have proved that the coating is not injured even when heating the said iron up to high red heat.

For the purpose of explaining the invention an apparatus suitable for carrying out the method has been shown in a diagrammatical way in the accompanying drawing.

In carrying out my improved method I first cover the body with a suitable coating, and I then direct a current of hot air or other gas against the coating, the temperature of the said current of air depending on the character of the coating. By using portable means for producing the blast of air the method is particularly adapted for coating large bodies which cannot be moved from their place, such for example as steel bridges. By means of my improved apparatus the coating can also be burnt at such parts which are not readily accessible.

A suitable coating substance is manufactured as follows: Castor-oil is mixed with from 5 to 10% of metal oxide, such as oxide of lead, manganese, cobalt, zinc, etc., gradually heated up to a temperature of from 280° to 300° C., until the mixture is clear. After cooling the mixture has the rigidity of beeswax, and it is soluble in suitable solvents consisting of easily drying oils, such as oil of turpentine, benzene, solvent naphtha, and the like. It may be mixed with other raw materials of the lac industry, such as resins, siccatives and the like. For example, 100 parts of castor-oil, 8 parts of oxide of zinc and 2 parts of manganese oxide hydrate have been mixed and treated in the manner indicated.

The temperature of the blast of air or other gas depends on the character of the coating, and I have found that the said blast can easily be heated up to 600° C. and more. It will be understood that when burning the preparation at high temperature any traces of humidity are removed from the body, and that therefore no bubbles are formed in the coating. Thus rusting of the steel is made impossible.

Any known or preferred means may be provided for producing a current of hot air or other gas. To show what may be done, I have illustrated in the figure an apparatus comprising a suitable carriage *a* having an internal combustion engine *b*, a compressor *c*, a tank *d* containing the lacquer, a blower *e* and a heater *f* mounted thereon. The tank *d* is connected by a flexible tube *g* with a spraying apparatus *h*, and the heater *f* is connected by a pipe *i* with a nozzle *j* for delivering the blast of hot air on the cold surface previously coated with the cold preparation. In the example shown in the figure the heating apparatus *f* comprises electric resistance wires *k* adapted to be connected to a suitable source of electric energy. When I refer, in the specification and claims, to the preparation as being applied in a cold state to a cold surface, I do not mean that the preparation and surface have been artificially cooled. I merely mean, as is evidenced by the foregoing description and the drawing, that the temperatures are substantially atmospheric.

I wish it to be understood that the apparatus for producing the blast of air is merely an example of what may be done. In some cases I heat the blast of gas by other means, for example by liquid fuel, or I use an ap-

paratus similar to a soldering lamp in which case, however, care must be taken that the open flame does not directly act on the body. Another example consists in using spraying apparatus such as are now used for various purposes.

I claim:

1. Method of providing on immovable objects a coating for the protection of the object from atmospheric corrosion, which consists in applying to the object a coating at normal temperature, the coating consisting of a mixture of castor oil and from 5 to 10% metal oxides, to which mixture solvents consisting of easily drying oils have been added, and in heating and burning in the coating by means of a portable hot air blast directed onto the coated parts and heating the coating to a temperature of up to 600°.
2. Method of providing on immovable objects a coating for the protection of the object from atmospheric corrosion, which consists in applying to the object a coating at normal temperature, the coating consisting of a mixture of 100 parts castor oil, 8 parts oxide of zinc, and two parts manganese oxide hydrate, to which mixture solvents consisting of easily drying oils have been added, and in heating and burning in the coating by means of a portable hot air blast directed onto the coated parts and heating the coating to a temperature of up to 600°.
3. Method of providing on immovable objects a coating for the protection of the object from atmospheric corrosion, which consists in preparing a coating substance by mixing castor oil with from 5 to 10% of metal oxides, heating said mixture to a temperature of from 280° to 300° C. until the mixture is clear, allowing the mixture to cool and then adding thereto inorganic filling material and solvents consisting of easily drying oils, coating the object at normal temperature with the substance thus prepared, heating and burning in the coating by means of a portable hot air blast directed onto the coated parts, and heating the coating to a temperature of up to 600°.

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