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STEPHEN N. SMITH

Machine for coolling Eyelets, Buttons ect.

PATENTED FEB 14 1871

Fig. 1.

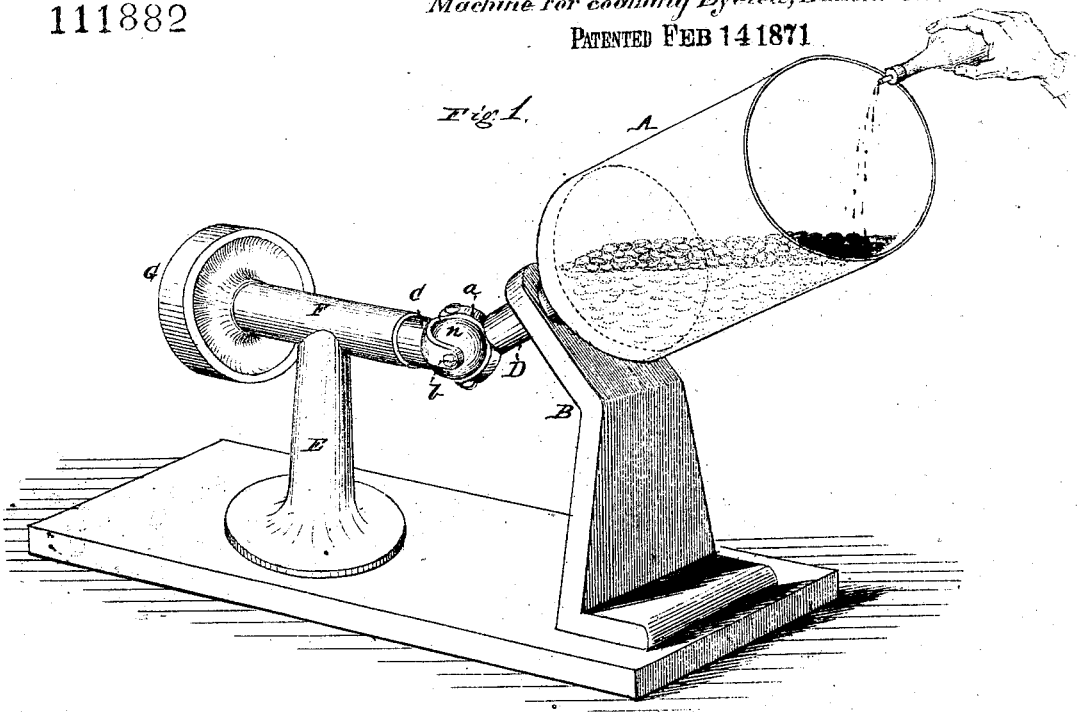
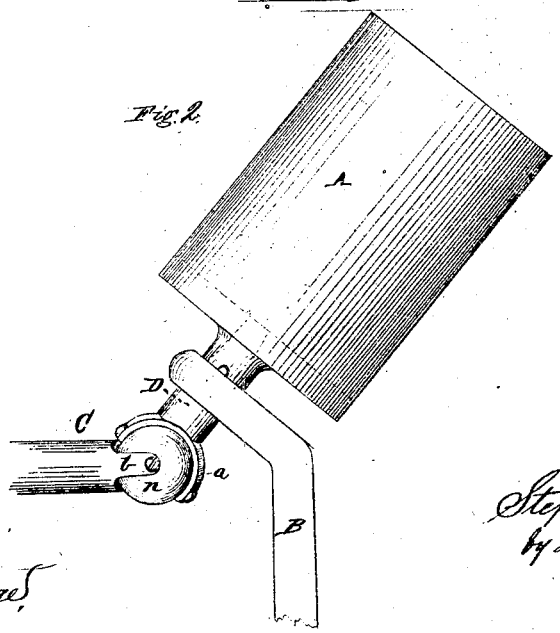


Fig. 2.



Witnesses:

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United States Patent Office.

STEPHEN N. SMITH, OF PROVIDENCE, RHODE ISLAND.

Letters Patent No. 111,882, dated February 14, 1871.

IMPROVEMENT IN JAPANNING EYELETS, BUTTONS, &c.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, STEPHEN N. SMITH, of Providence, in the county of Providence and State of Rhode Island, have invented certain Improvements in the Process of Japanning Eyelets, Buttons, &c., of which the following is a specification, reference being had to the accompanying drawing.

My invention consists in an improved process and apparatus for coating eyelets, buttons, and similar articles with varnish or Japan, as hereinafter more fully explained.

Figure 1 is a perspective view of the apparatus, in use.

Figure 2 is a side elevation of the main portion of the same.

In the manufacture of eyelets and some kinds of metal buttons, especially those intended for use on shoes, it is necessary to color them black, which is done by coating them with a suitably-prepared varnish or japan. This material when applied is in a liquid form and more or less sticky or adhesive, and it is therefore difficult by any hitherto known process to apply this coating to eyelets or buttons and similar small articles in such a manner as to coat them all over evenly, and not cause them to stick together.

The usual method has been to dip or immerse a quantity of them in the japan and then let it drain off; but in so doing there is always a surplus of the japan left on the articles at the points where they touch each other, which prevents their being evenly coated, and this surplus of the coating shows on them afterward, thus rendering them defective in appearance.

To accomplish the desired object of coating them evenly and giving them a smooth and finished appearance, I provide a cylindrical vessel, A, of tin or other suitable material, having one end open, with its opposite end closed.

This cylinder I mount on a shaft, D, attached rigidly to its bottom at the center, and then secure the shaft in suitable bearings, so as to cause the cylinder A to stand at an angle of forty-five degrees or less, as represented in fig. 2, with its open end uppermost. The lower end of this shaft D I then connect by a universal joint, as shown in figs. 1 and 2, to a horizontal shaft, C, having a pulley, G, upon its opposite end for imparting motion to it. I have shown the shaft C mounted in a tubular bearing, F, supported by a standard, E; but it is obvious that it may be mounted in any suitable supports, and that instead of the universal joint it may be connected to the shaft of the cylinder by bevel-gear, or in any other suitable manner; or the shaft C may be dispensed with entirely, and a pulley or gear-wheel be secured upon the shaft D of the cylinder for imparting a rotary motion to the latter.

In using the apparatus a quantity of the eyelets, buttons, or other articles to be coated are placed loosely in the cylinder, which is then made to revolve slowly so as to cause the articles to tumble or roll over one another continuously within the cylinder.

The japan is placed in a bottle or other suitable vessel, which is held in the hand of the operator above or over the open end of the cylinder, where it is squirted or showered gradually upon the tumbling mass within. In this way the japan is applied gradually and evenly over the entire surface of all the articles contained in the cylinder, their constant rubbing against each other preventing it from accumulating in uneven quantities or thickness upon any portion of them, and also preventing the articles from adhering one to another. The process is continued until the articles are thoroughly and evenly coated, when they are removed from the cylinder, which is made detachable for that purpose, after which the japan is hardened or dried by heating the articles in a furnace prepared for that purpose.

Having thus fully described my invention,

What I claim is—

1. The herein-described process of coating or japanning eyelets, buttons, and similar articles, that is to say, by sprinkling the liquid upon a mass of the articles while the latter are kept in motion, tumbling or rolling over or against each other, substantially as set forth.

2. The inclined rotating cylinder A, arranged to operate substantially as and for the purpose set forth.

STEPHEN N. SMITH.

Witnesses:

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