

UNITED STATES PATENT OFFICE.

ROBERT H. ISBELL, OF NEW MILFORD, CONNECTICUT.

IMPROVEMENT IN PROCESSES OF POLISHING BUTTONS.

Specification forming part of Letters Patent No. **150,959**, dated May 19, 1874; application filed October 22, 1873.

To all whom it may concern:

Be it known that I, ROBERT H. ISBELL, of New Milford, in the county of Litchfield and State of Connecticut, have invented a novel Method of Polishing Buttons, &c., of which the following is a specification:

This invention comprises a novel mode of smoothing, polishing, or finishing buttons and similar articles, by subjecting them to friction in contact with prepared chalk, so called, pulverized charcoal, or equivalent fine cutting material, mingled with spirits of turpentine, naphtha, or similar liquid, which, unlike water, will not raise the grain of the vegetable ivory, horn, bone, wood, or other substance of which the buttons, &c., may be composed. By this means such articles may be brought, in a few hours, to a better finish than by the old method continued for several days.

In carrying my improved process into practice, I take the buttons or other articles—such, for instance, as checker-men—either as they come from the turning or shaping mechanism, or, when colored, as they come from the dye or color suitably applied and allowed to become dried or fixed thereon. I then mingle any desired quantity of the articles, by measure, with, say, a double measure of prepared chalk, or of pulverized charcoal, or of any other substance possessed of similar fine cutting, smoothing, or abrading properties. I then add to the whole any desired quantity of spirits of turpentine or of naphtha, or of any like liquid which, when brought in contact with the material of which the articles are made, will not, as it is technically termed, “raise the grain” thereof. The proportion of the chalk or its equivalent, and also of the liquid, may be varied within wide limits, without affecting the principle of my invention.

The mass thus formed is placed within a “tumbling-box,” or rotating vessel of any or dinary or suitable kind, which is then revolved during a space of several hours, (the time required varying somewhat, according to the material of which the articles are made, and the character of the abrading substance used,) until the frictional action exerted upon the articles by the abrading material in the pres-

ence of the liquid, which assists its action, have reduced the surfaces to the requisite smoothness.

When preferred, the articles, together with the liquid and abrading substance in suitable proportions, may be placed in the tumbling-box without previous admixture, the operation of the box insuring their commingling, and the subsequent polishing effect.

When desired, in lieu of a tight tumbling-box, wholly retaining its contents, one perforated or made of cloth or fibrous material may be used, provided it is run in a trough to retain upon or in contact with the articles, and with the abrading substance, the spirits of turpentine, naphtha, or other liquid essential to the proper operation of the abrading substance.

In the absence of the liquids hereinbefore particularly specified, alcohol or kerosene may be used, but with inferior results. It will, moreover, be understood that in place of the tumbling-box of either kind herein previously indicated, any other mechanical appliance may be used, whereby the buttons, &c., may be subjected to friction in contact with fine cutting substance and a liquid possessed of the properties herein set forth as essential.

It will further be understood that the tumbling-box itself, in either of the forms hereinbefore indicated, is old and well known, and is adopted by me simply as a suitable and efficient mechanical agency for carrying into practice the process of finishing buttons by subjecting them to frictional action in contact with the substances herein previously fully set forth, such treatment of the buttons, &c., constituting the gist or essence of my invention.

What I claim as my invention is—

The within-described method of polishing buttons, &c., by subjecting them to friction in contact with a fine cutting material and turpentine, naphtha, or equivalent liquid, substantially as herein set forth.

ROBERT H. ISBELL.

Witnesses:

JAMES A. WHITNEY,
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