## UNITED STATES PATENT OFFICE.

JOHN BENE, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN PROCESSES FOR REFINING AND BLEACHING HUMAN HAIR.

Specification forming part of Letters Patent No. 134,577, dated November 21, 1876; application filed May 3, 1876.

To all whom it may concern:

Be it known that I, John Béné, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Process for Bleaching and Refining Human Hair, which process is fully set forth and described in the following specification.

This invention relates to that class of processes employed for bleaching and refining the coarse black human hair, such as is imported from China and Japan, and which, in its natural state, is unfit for use or sale in this market. The present process consists of a method of bleaching and refining by the use of certain chemicals, the combination and use of which are varied according to the fixed color that is to be given the hair when finished.

In carrying out my invention, for the purpose of producing from the coarse black hair alluded to a soft hair of a dark-brown hue, I mix in a vat of glass or other suitable material four quarts of muriatic acid and one ounce of chlorate of potash, into which solution the hair is dipped and retained until the desired fineness and shade or color is obtained.

This process and compound tends to the refining of the hair in addition to the bleaching, and they give to it a soft appearance, entirely unlike the hair in its original state.

In order to set the colors obtained by the process, as above detailed, I prepare a bath as follows, which may be mixed in any suitable vessel: Four gallons warm water, one quart

of muriate of tin, one ounce of bisulphite of soda, and four ounces of muriatic acid, the bleached hair being immersed in this bath until the colors are firmly set.

As a finishing process for removing all impurities, I wash the hair in a final bath of water and ammonia, after which it is spread and dried, when it is ready for market.

The hair, after being manipulated by the process as described, loses all of its original harshness of texture and color; and assumes a soft silken texture, as well as a brilliant color, whose luster is permanently retained.

I claim as my invention-

The process of bleaching and refining haman hair, which consists of first bathing the hair in a bath composed of muriatic acid and chloride of potash, which bath refines the hair and gives the desired color; second, in bathing the hair so refined and bleached in a bath composed of warm water, muriate of tin, bisulphite of soda, and muriatic acid, which bath fixes or sets the color; third, in finally bathing the hair so refined and bleached in a bath of water and ammonia, which cleanses and removes all impurities therefrom, the component parts of said baths being in the quantities substantially as herein set forth.

JOHN BENE.

In presence of—
A. L. Munson,
LEWIS WILKINSON.