No. 15,983.

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J. PHYFE. Bleaching Ivory.

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Patented Oct. 28, 1856.

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N. PETERS, Photo-Lithographer, Washington, D. C.

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UNITED STATES PATENT OFFICE.

JNO. PHYFE, OF NEW YORK, N. Y.

IVORY-BLEACHING APPARATUS.

Specification of Letters Patent No. 15,983, dated October 28, 1856.

To all whom it may concern: Be it known that I, JOHN PHYFE, of the city, county, and State of New York, have invented a new and useful Improvement in 5 the Process of Bleaching Ivory; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specifi-10 cation and represents a vertical section of an apparatus for performing my invention. The invention consists in placing the ivory upon a glass table or bed which is exposed to the direct rays of the sun and has a 15 reflector below it to reflect back again the light passing through the ivory and through the table or bed and thereby effect the bleaching of the under surface and lower part of the ivory by reflected light, by that 20 means obviating to a great extent the necessity of turning over the pieces of ivory during the bleaching process. To enable others to make and use my invention I will proceed to describe the appa-25 ratus shown in the drawing by which it is performed and the manner in which it is conducted. A is a flat glass table fitted to a frame F, and supported in a horizontal or nearly 30 horizontal position on standards a, a. B, is the reflector made of silvered glass or metal supported on the same standards a, a, some distance below the table. This reflector may be arranged parallel with or 35 at any suitable angle to the table A. The space between the table and the reflector is inclosed by glass b, b, so as to protect the reflector from dust and moisture and pre-

CDE is a cover composed of a frame C, so constructed as to hold an inclined plate of glass D, or a sash filled with panes of glass, and side lights E, E, said cover be- 45 ing hinged to the frame F, at d, and closing down upon the said frame in such a manner as to exclude air from the ivory placed on the table A, excepting of course the air that is inclosed within the cover. 50 The above described apparatus is placed on the roof of a building or under a glass roof or skylight or in any place where the table A is exposed to the direct rays of the sun. The pieces of ivory to be bleached 55 are placed upon the table A, while the cover is raised as indicated in red outline in the drawing, and may cover the whole surface of the table, and the cover is then shut down. The rays of the sun being then ad- 60 mitted through the cover to the ivory pass through the ivory and through the glass table to the reflector B by which they are thrown back again through the glass table and the ivory. I do not claim the exclusion of the air from the ivory during the bleaching process, and I do not confine myself to the construction of the apparatus in such a manner as to exclude the air during the process, or to 70 any particular construction of the apparatus; but

What I claim as my invention and desire to secure by Letters Patent is—

The bleaching of ivory by exposure to 75 the rays of the sun on a glass table with a reflector below it substantially as herein described.

vent its brightness being impaired. These side walls b, b, may be of clear glass or may 40 be reflectors.

Witnesses: W. TUSCH, JAMES F. BUCKLEY.

JOHN PHYFE.