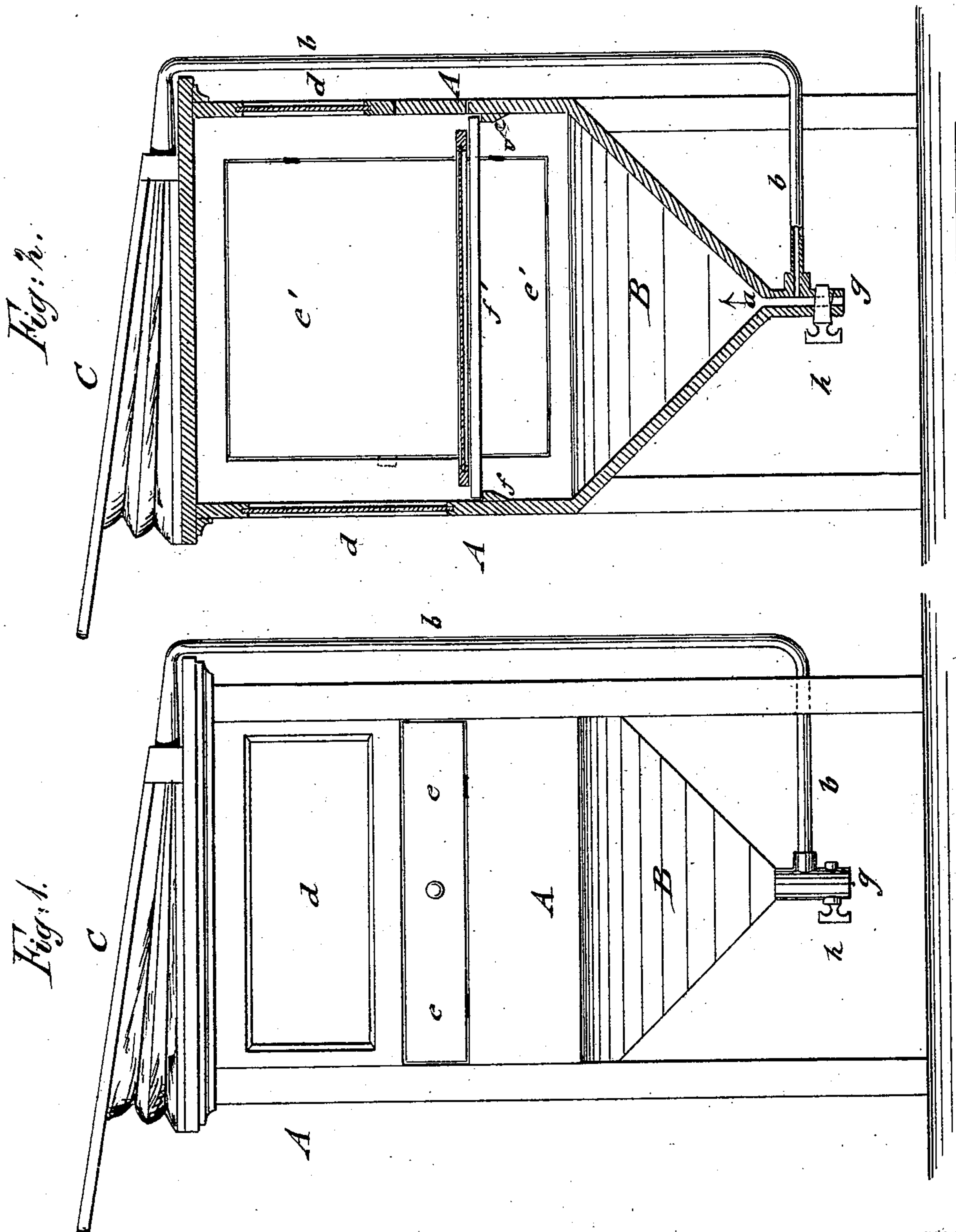


W. KURTZ.

Method of and Apparatus for Tinting Drawings  
and Photographs.

No. 226,760.

Patented April 20, 1880.



WITNESSES:

Geo. W. Louie  
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# UNITED STATES PATENT OFFICE.

WILLIAM KURTZ, OF NEW YORK, N. Y.

METHOD OF AND APPARATUS FOR TINTING DRAWINGS AND PHOTOGRAPHS.

SPECIFICATION forming part of Letters Patent No. 226,760, dated April 20, 1880.

Application filed January 30, 1880.

*To all whom it may concern :*

Be it known that I, WILLIAM KURTZ, of the city, county, and State of New York, have invented certain new and useful Improvements in Methods and Apparatus for Tinting Drawings and Photographs, of which the following is a specification.

This invention relates to an improved apparatus and method for producing on drawings, photographs, and other prints an even flat tint of any color or size in a very short time and by very simple means without the use of a brush, fatty inks, or chemicals of any kind.

The invention consists in exposing the drawing, photograph, engraving, or other article in a closed box having a hopper-shaped bottom to the action of a powdered color, which is minutely distributed therein by a current of air forced into the box through an air-inlet orifice at the lowest point of the hopper by means of a bellows or other air-forcing device. The article to be tinted is supported within the box in a suitable manner, and the collected color removed by means of a discharge-pipe and stop-cock below the inlet-orifice.

In the accompanying drawings, Figure 1 represents a side elevation, and Fig. 2 a vertical transverse section, of my improved apparatus for tinting drawings, photographs, and other prints.

Similar letters of reference indicate corresponding parts.

A in the drawings represents a box of suitable size, made of wood, sheet metal, or any other suitable material. It is provided with a hopper or funnel shaped bottom, B, which has at its lowermost point an air-inlet orifice, *a*, that is connected by a pipe, *b*, to a pair of bellows or other air-forcing apparatus, C, which, for convenience of working, is preferably arranged on the top of the box A. The sides of the box are provided with glass windows *d*, which admit the looking through the box. Below the windows is hinged a small door, *e*, through which the drawing, photograph, or other article to be tinted is inserted into or removed from the box. Directly below the door are arranged, at the inside of the box, projecting cleats *f*, which serve to support cross-strips *f'*, on which the drawing or other article is placed. A second door, *e'*, serves

for throwing in the color by which the tint is to be produced. I prefer to use common powdered paint, such as used by house-painters, mixed in such a manner that the proper tint to be laid on is obtained. When the color is thrown in the box is closed and the bellows are worked for about half a minute. The current of air forced in through the inlet-orifice *a* throws up the color with great force, the heavier particles being collected by the funnel-shaped bottom, lifted up again by the air-current, and so on. The box is thereby entirely filled with minutely-divided particles of color, while the sand and the coarser particles are collected by the funnel. The lighter parts will float in the middle portion of the box and the finest particles in the top part, where they remain almost standing in the air, which can be seen through the windows of the box. The paper is then placed in position on the cross-strips of the box, and allowed to remain thereon for a short time, until the minute particles of the color will settle on the same and produce a flat tint of such a smoothness and uniformity as cannot be accomplished by hand with a brush, or by printing, or by any other process. After the drawing is tinted the color collected at the lowermost part of the hopper is removed through a discharge-pipe, *g*, with stop-cock *h* below the air-inlet orifice, and a new color thrown in. Thus the colors may be quickly changed as desired.

Several tints of different colors may be laid on, one after the other, and thus a plain tint or blended tints be obtained. To a portrait in crayon or charcoal, for instance, may be imparted a warm life-like appearance by covering the face, hair, and beard with a cut-out of tracing-paper, and giving to the background, drapery, &c., a tint of bluish color. The cut-out is then removed and a warm yellowish tint allowed to settle over the entire picture, and the result will be that the face will be warmed up, the hair and beard enlivened to a healthy pleasing black, and the head itself be made to stand out in fine relief from the bluish background.

On drawing-papers, which have more or less tooth, and which are not pressed, the fixing of the color is not required, as the fine particles are retained in the pores of the paper. If



the fixing of the color is required, it can be accomplished by moistening the back of the paper with a sponge, the drawing-paper having sufficient glue to retain the color permanently without disturbing any part of the work. Smoother papers, which have but little glue, should be sized with gelatine-water before the drawing is commenced. The color may finally be fixed by holding the paper over a dish of hot water.

The apparatus is of great advantage to photographers, as flat tints may be laid over backgrounds on large or small work at a saving of time, producing pictures of excellent finish and effect.

Architects, painters, draftsmen, &c., are enabled in a few minutes to give their work, whatever it be, a warm effect by laying on one or more flat tints without removing the pictures from the stretcher or board.

Another advantage of this process is that the tints, before they are fixed, may be removed with bread, rubber, or a razor, and thus the white paper restored, which gives high lights far superior to the very objectionable laying on of the high lights by white pigments. The tints may be applied to a drawing or photograph after it is entirely or partly finished, and laid over the whole or over parts only, without the slightest injury to the work, at a very small expense, and in a very short time.

Having thus described my invention, I claim

as new and desire to secure by Letters Patent—

1. An apparatus for tinting drawings, photographs, and other pictures, consisting of an air-tight box having a hopper or funnel shaped bottom and an air-inlet orifice at the lowermost point, and of a bellows or other air-forcing device connected to the inlet-orifice, substantially as set forth.

2. In an apparatus for tinting drawings, photographs, and other pictures, an air-tight box having side windows and doors, interior supports for the drawing, and a funnel or hopper shaped bottom, with air-inlet orifice and a discharge-pipe and stop-cock below the orifice, substantially as described.

3. The method herein described of laying flat tints on drawings, photographs, and other pictures, consisting in minutely distributing the color by an air-current in an air-tight box and allowing the floating particles of color to settle on the exposed portions of the paper, substantially as specified.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two witnesses this 27th day of January, 1880.

WILLIAM KURTZ.

Witnesses:

GEO. W. LOUD,  
HERRMANN BASCH.