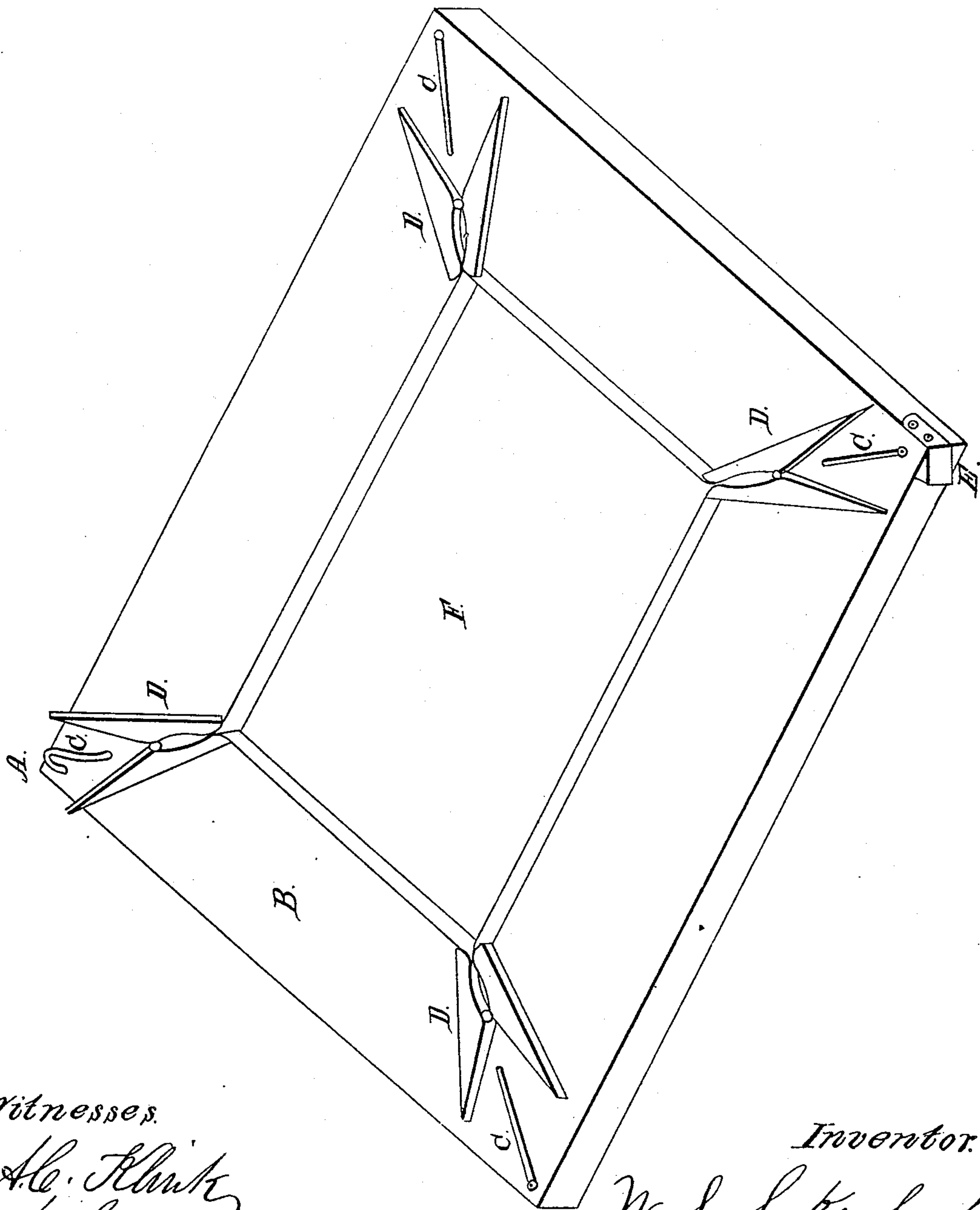


W. S. Lukenbach.

App. for Sensitizing Photographic Paper.

N^o 89,488.

Patented Apr. 27, 1869.



Witnesses.

*A. C. Kline
J. Corbett*

Inventor.

W. S. Lukenbach

United States Patent Office.

WILLIAM S. LUKENBACH, OF NEWPORT, PENNSYLVANIA.

Letters Patent No. 89,488, dated April 27, 1869.

APPARATUS FOR FLOWING AND SENSITIZING PHOTOGRAPHIC PAPER, &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, WILLIAM S. LUKENBACH, of Newport, in the county of Perry, in the State of Pennsylvania, have invented a new and improved Mode, or Process of "Sensitizing Photographic Paper;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The nature of my invention consists in sensitizing either albumenized or plain photographic paper, by pouring, or flowing over it a solution of "nitrate of silver," made in strength of from fifty to sixty grains of said nitrate of silver, to one ounce of water, instead of floating the paper in a dish containing the silver and other chemicals.

My invention may be styled "The Flowing-Process of Sensitizing Photographic Paper."

To enable others skilled in the art to make and use my invention and process, I will proceed to describe its construction and operation.

I make a light wooden frame, as shown by A, sufficiently large to sensitize a full-sized sheet of photographic paper. Said paper, in size, is uniform, being seventeen and a half inches wide, by twenty-three inches long.

To enable me to place a sheet of paper of this size on my frame, I construct said frame twenty-two inches in width, by twenty-eight inches in length, allowing five inches each way for the edge of the frame, and the springs, or fastenings, hereinafter described.

One side of this frame I cover with a thin cloth of muslin, or other light material, B, (the color of which is immaterial, though it were better, black,) securely fastened to the edges by glue or tacks, and stretched across the frame so as to allow it to become a little concave in the centre.

At each of the four corners of this frame, I attach, by means of elastic cords, as shown by C C C C, a spring clothes-pin, or other appliance of a similar nature, as shown by D D D D, each of which extends from the edge of the frame toward the centre, about three inches.

At each of the four corners, a small tin keeper may be placed, to secure the springs, or catches, and keep them off the cloth covering of the frame, when not in use, as shown at E.

The elastic cords may be dispensed with, and the catches used without being fastened to the frame.

I take a sheet of photographic paper, and turn up the edges all around from one-eighth to one-half of an inch, so as to form a square hollow dish, as shown by F. This I place on the centre of the cloth covering the frame, and secure, in the spring-catches D, each

corner of the paper dish thus formed, so that it is held securely in its place.

In a graduate or wide-mouth bottle, I have a solution of "nitrate of silver," in strength of from fifty to sixty grains of the "nitrate of silver," to one ounce of water, the strength regulated by the climate and atmospheric temperature. This solution I pour into this paper dish, in the proportion of three ounces to a sheet of paper, and flow it twice over the surface of the paper. This is done by moving the frame gently from side to side. I then loosen the springs D at three of the corners of the paper, and, by lowering or moving the paper dish to the edge, or corner of the frame A, I pour back into the graduate or bottle the solution of silver which has not been taken up by the paper.

The paper is then hung up in a dark room to dry, and when perfectly dry is ready for use in printing.

This process may be used in sensitizing either a full-sized sheet of paper, or any portion of it, and the frame may be made of any size to suit the wants of the operator.

The back, or outer side of the frame, may be covered with thin boards or pasteboard, which can be used as a table, upon which to fold the paper, or it may be left uncovered.

The advantages of my invention or process over the methods now in use, are—

First. It dispenses with the use of the dishes now in use, which are expensive, and which, unless perfectly clean, and free from all foreign substance, such as dust, &c., destroy and render worthless the silver poured into them.

Second. These frames are simple, and any photographer can construct one.

Third. No other chemicals are used in sensitizing the paper but the solution of "nitrate of silver," made as aforesaid.

Fourth. It requires less "silver" to sensitize the paper, than by any other method known, three ounces being sufficient to sensitize a full-sized sheet of paper and when used and poured back into the bottle, it has lost but little of its strength, while in a floating-bath it requires from a pint to a quart of "nitrate of silver" solution, for a tub large enough to sensitize the same-sized sheet of paper, and the paper remaining in the bath for some time, absorbs more of the silver. A portion also adheres to the sides of the dish, which is a loss to the operator.

Fifth. The "nitrate of silver" does not so readily discolor by this process, and, in using paper of some makes, not at all.

Sixth. It requires less time to sensitize the paper by this process.

Seventh. The paper thus sensitized dries much

quicker, is more sensitive, and, when dry, is ready for use, thus dispensing entirely with the fuming-process now used.

Eighth. The paper retains the albumen-gloss better when thus prepared.

Ninth. Any desired tone is more easily and readily obtained, especially the "sepia" tone so much sought after.

Tenth. It requires less chloride of gold to tone the same amount of prints, by my process, and the paper thus prepared has greater body and more intensity, and will print in much less time.

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

The frame A, for the purpose of sensitizing photographic paper, or other material, either albumenized or plain, by the use of a solution of "nitrate of silver," in the flowing-process, or for flowing with other solutions, substantially in the manner, and for the purposes set forth.

W. S. LUKENBACH.

Witnesses:

A. C. H. WEBSTER,
A. C. KLINK.