

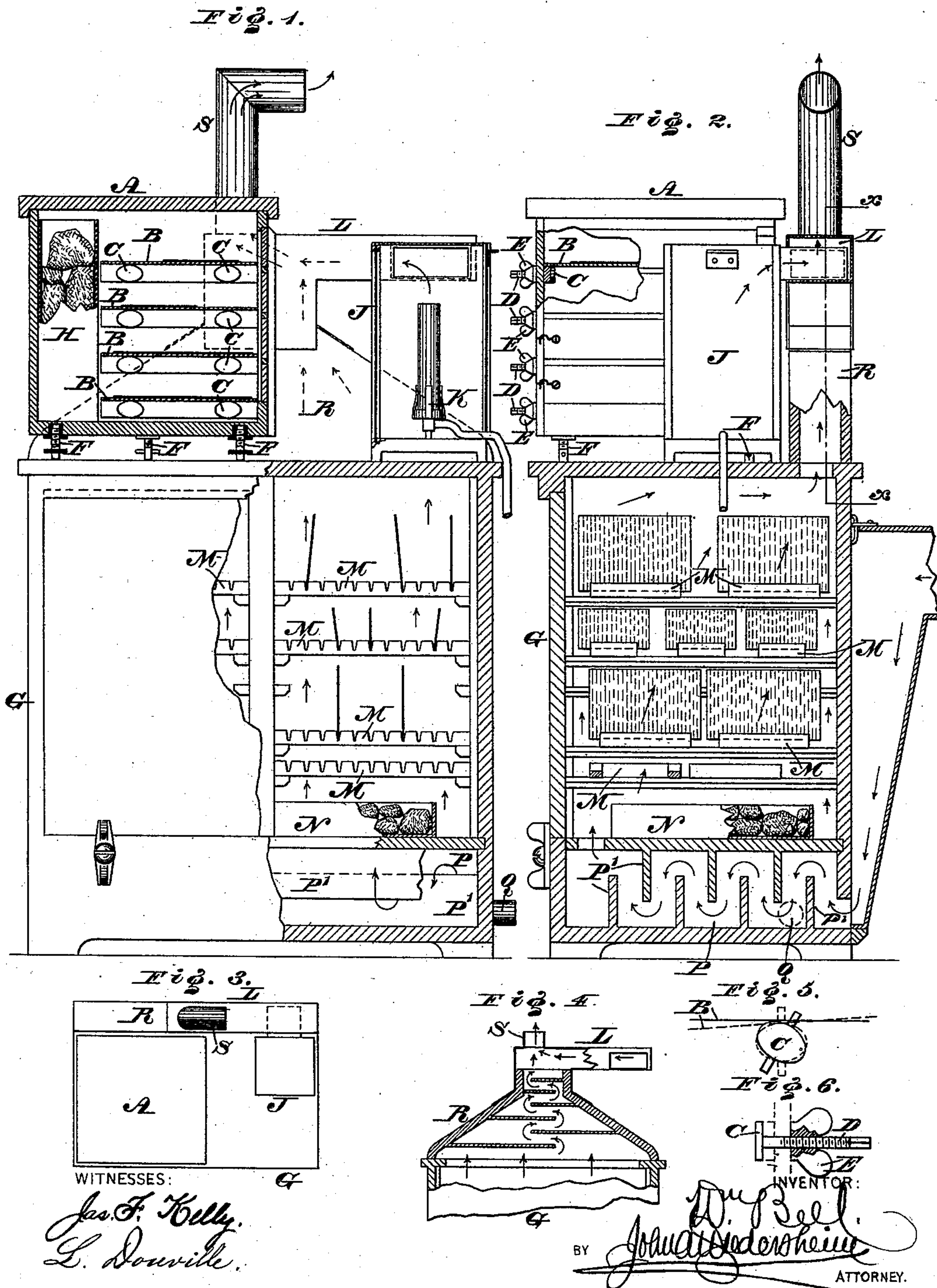
(No Model.)

W. BELL.

APPARATUS FOR HEATING, COOLING, VENTILATING, AND DRYING  
PHOTOGRAPHIC PLATES.

No. 384,416.

Patented June 12, 1888.





# UNITED STATES PATENT OFFICE.

WILLIAM BELL, OF PHILADELPHIA, PENNSYLVANIA.

APPARATUS FOR HEATING, COOLING, VENTILATING, AND DRYING PHOTOGRAPHIC PLATES.

SPECIFICATION forming part of Letters Patent No. 384,416, dated June 12, 1888.

Application filed May 10, 1887. Serial No. 237,687. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM BELL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Heating, Cooling, Ventilating, and Drying Gelatine and other Photographic Plates, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of an apparatus for ventilating and drying gelatine and other photographic plates, the same embodying chests or receptacles for the plate to be coated and subsequently storing the same, means for heating and cooling the chests and admitting air thereto, devices for leveling the supports for the plates so that the coating is uniform, and means for preventing the entrance of light into the storage-chest.

Figures 1 and 2 represent vertical sections of an apparatus embodying my invention. Fig. 3 represents a top view thereof on a reduced scale. Fig. 4 represents a section in line *x x*, Fig. 2, on a reduced scale. Figs. 5 and 6 represent views of the adjusting or leveling device of the shelves of the apparatus.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A represents a chest containing a number of shelves, B, which are adjustably supported on the elliptical or cam-shaped heads C of screws D, the latter passing through the sides of the chest, and having jam-nuts E, whereby the screws may be tightened when the shelves are adjusted. The chest A is supported on vertical screws F, which rest on the top of a chest, G, said screws entering openings or sockets in the base of the chest, whereby by rotating them the chest may be adjusted so as to occupy a truly horizontal position.

The shelves B may also be adjusted so as to occupy a truly horizontal position, this being accomplished by the screws D, it being evident that by rotating said screws the heads C thereof will raise or lower said shelves, as may be required. By these provisions the plates to be coated, which are placed on the shelves, are prevented from having the coating dry in an irregular manner.

Within the chest A is a chamber, H, for containing ice or other cooling medium, whereby the temperature of the chest may be reduced when so required.

J represents a chamber containing a gas or other lamp, K, which is properly supported, said chamber being in communication with an exit-flue, L.

After the plates have been dried or set in the chest A they are stored in the chest G, which has suitable shelves, M, for such purpose. In order to keep the plates in the chest G at the proper temperature, the lower part of said chest contains an ice or cooling chamber, N, and a hot-air chamber, P, both chambers being in communication with the chest G. The chamber P is connected with a heating apparatus by means of a flue, Q. The chamber P has a series of vertical partitions, P', alternating from the top and bottom of said chamber, forming a zigzag passage, thus providing a large heating surface, and more especially designed for and preventing the entrance of light to the plates. When the temperature in the chest G is too high, ice or other cooling medium is placed in the chamber N, thus reducing said temperature. In order to prevent the entrance of light into the chest G at the top thereof, the exit part or flue R of said chest contains horizontal partitions alternating from opposite sides, and forming a zigzag passage in said flue as a cut-off for light. When the heat leaves the chest G, it enters the flue R, and from thence escapes into the flue L and chimney S, the upward escape in the chest G being increased by said chimney S and flue L.

In warm weather natural heat is sufficient for drying the plates, and fresh air may be admitted into the chests for ventilating the same; but in such weather ice or other cooling medium may be employed to reduce the temperature in the respective chests when so required. The top portion of the chest G not occupied by the chest A and J and the flue R is plane or flat, so as to form a table on which the coating of the plates may be accomplished.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A photographic heating and cooling apparatus consisting of a chest with shelves for

drying the coated plates, in combination with a refrigerating-chamber, substantially as and for the purpose set forth.

2. A photographic heating and cooling apparatus consisting of an adjustable chest with shelves for drying the coated plates, in combination with a refrigerating chamber at one side and a heating device on another side thereof, substantially as and for the purpose set forth.

3. A chest containing shelves and screws having adjusting - heads C, on which said shelves are rested, substantially as described.

4. A chest provided with leveling-screws and containing plate-supporting shelves with adjusting-screws, substantially as described.

5. A chest with plate-supporting shelves, a storage chest, with a heating device and exit-flue connected with the storage chest, combined and operating substantially as described.

6. A photographic heating and cooling apparatus consisting of the chest G, in combination with the chest A thereon and provided with shelves, the heating-chest J, and the flue R, that portion of the top of said chest G not occupied by the said chests A and J and flue R being flat, substantially as and for the purpose set forth.

7. A photographic heating and cooling apparatus having a plate-receiving chamber with a heating-chamber having zigzag passages, and a flue with horizontal projections alternately secured to the inner wall thereof, substantially as described.

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Witnesses:

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