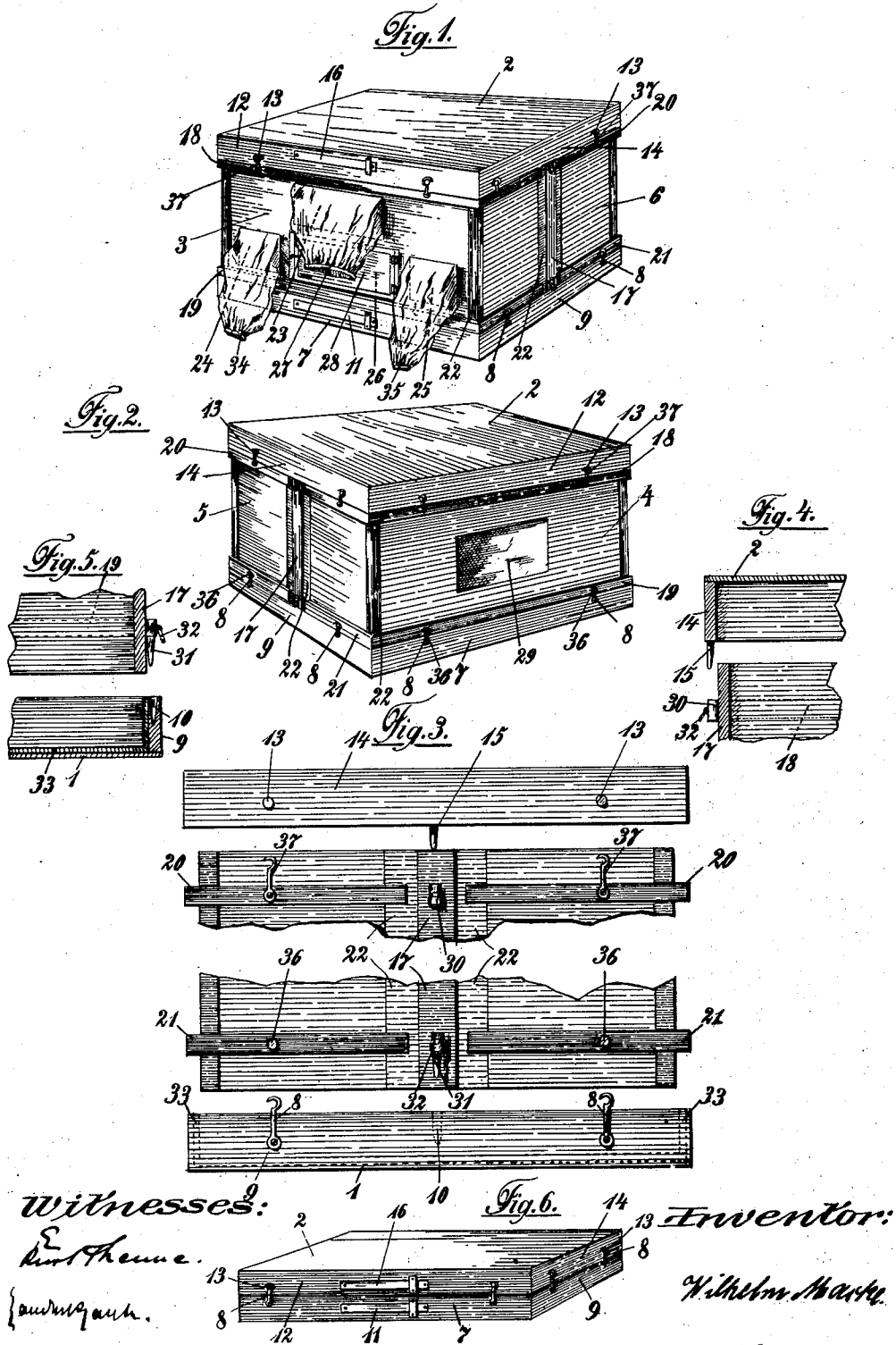


W. MACKE.
 PORTABLE FOLDING DARK CHAMBER.
 APPLICATION FILED NOV. 29, 1910.

1,027,662.

Patented May 28, 1912.



UNITED STATES PATENT OFFICE.

WILHELM MACKE, OF MARIENFELDE, GERMANY.

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Specification of Letters Patent.

Patented May 28, 1912.

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To all whom it may concern:

Be it known that I, WILHELM MACKE, music-instrument maker, subject of the Emperor of Germany, residing at Marienfelde, Kingdom of Prussia, Germany, have invented new and useful Improvements in Portable Folding Dark Chambers, of which the following is a specification.

Transportable folding dark chambers should enable photographers to develop their negatives at any spot whatsoever, whether in the open or in a room. They should be easily transportable but nevertheless fulfil all the conditions required from the dark room of the studio. All the systems hitherto proposed have, however, failed because they were unable to fulfil the necessary requirements. The dark chamber according to the present invention is a result of practical tests and complies with all requirements as may be seen from the following description.

I shall now describe my invention with reference to the accompanying drawing showing one form of construction in which:—

Figure 1 is a front view in perspective, Fig. 2 is a back view in perspective, Fig. 3 is a side view showing the connection by means of pins. Fig. 4 is a sectional side view of the lid, Fig. 5 is a sectional side view of the bottom, Fig. 6 is a perspective view of the dark chamber folded together.

The dark chamber consists of the bottom 1, the lid 2 and the walls 3, 4, 5, 6. The bottom, the lid and the walls each form a separate part. The bottom and the lid are of similar construction and each consists of a rectangular frame. The bottom frame 7 is provided on each of its four side edges with two hooks 8 and in the middle of both its cross bars 9 has a vertical boring 10, and a handle 11 is mounted on the front longitudinal side. Corresponding to the hooks 8 of the bottom frame, the frame 12 of the lid is provided with pins 13, and a pin 15 corresponding to the boring 10 in the middle of each of the cross bars 14. It is furthermore fitted with a handle 16 and is made of wood, cardboard, aluminium or other light material or the like, and similar to the bottom and the other part of the lid can be covered over with leather, linen or the like.

The walls are formed by the front wall 3, the back wall 4 and the side walls 5 and 6

forming an open ended rectangular hollow prism, the vertical edges of which are provided with rabbets 22. 5 and 6 each consists of two parts which rest against each other by rabbets 22 with a fillet 17 forming a vertical middle stiffening fillet which is also the bearer of the below described hook-and pin-arrangement. By the arrangement of the rabbets 22 the walls can be folded together, the two side walls 5 and 6, made in two parts, being folded inward. 3 and 4 are provided at the top and bottom with fillets 18 and 19 passing right along them, whereas the fillets 20 and 21 are interrupted by the fillet 17 and the rabbet 22. Fillets 18 and fillets 20, adjacent to fillets 17, are provided with hooks, 19 and 21 with corresponding pins 36.

The front wall 3 has four openings. 23 is rectangular, and is arranged directly in the middle beneath the fillet 18 and is sufficiently large to permit of the operator easily inspecting the interior of the dark chamber. This opening 23 is fitted with a sleeve 27 which can be fastened around the neck by means of a cord. 24 and 25 are square, and are provided with sleeves 34 and 35 closely inclosing the arms. The rectangular opening 26 is covered over by means of a flap 28 and serves for introducing the plates and chemicals. The red glass window 29 is inserted as low down as possible in the middle of the back wall 4, so as to allow the light to fall directly on to the plate to be developed.

The fillet 17 is provided at the top, with an eye 30 for the pin 15 of the lid, and at the bottom with the pin 31 for the boring of the bottom 10. 30 and 31 are each provided with a ring 32 which serves for more conveniently manipulating the connection. The protective plate 33 and the bottom are made of glass, porcelain or other acid-proof material, and is arranged within the bottom 1.

When setting up the dark chamber the pins 31 are first inserted into the borings of the bottom 10, and the hooks 8 engaged with the pins 36. Then the lid is placed in position, the pins 15 being inserted into the eyes 30 and the hooks 37 engaged with the pins 13. These operations will be reversed when taking the apparatus to pieces. The middle walls when folded together fit exactly into the bottom frame. The lid and bottom also fit on each other, the pins 15

engage in the borings 10, the hooks 8 engage with the pins 13.

The special advantage of the present arrangement as compared with previous constructions consists in that the light falls from outside through the glass 29 directly on the plate to be developed and is not interrupted from time to time by the hands when manipulating the plate. When the light is allowed to enter at the side, the plate is liable to show lines and spots. By the arrangement of the opening 23 and the hand sleeve 27 it is possible directly to observe the developing operation, and only in this manner is it possible to obtain really good work, because with those dark chambers in which the operations are observed from outside through a red glass the course of the operation is not so plainly perceptible.

I claim:—

A portable folding dark chamber comprising three elements, a bottom (1), a lid (2) and a wall structure, the latter comprising

members (3, 4, 5, 6,) rabbeted together at their meeting edges, said top and wall structure adapted to be connected by pins (13) and hooks (37) on the top and wall structure respectively and said wall structure and bottom adapted to be connected by pins (36) and hooks (8) on the wall structure and bottom respectively; there being positioning means provided comprising lid pins (15) for engagement with eyes (30) on the wall structure and pins (31) for engagement in corresponding bores (10) in the bottom, one of the wall structure members (3) being provided with an opening (23) fitted with a head-sleeve (27).

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILHELM MACKE.

Witnesses:

RUOT THEUNE,
GOURM RAUM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."