

J. COOPER.
Evaporating Pan.

No. 58,607.

Patented Oct. 9, 1866.

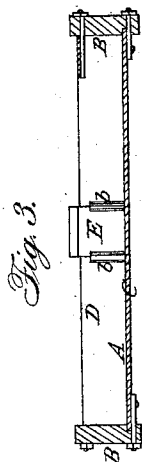


Fig. 3.

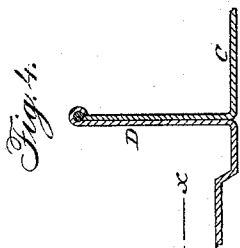


Fig. 4.

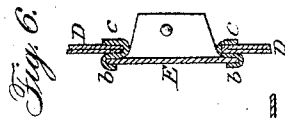


Fig. 6.

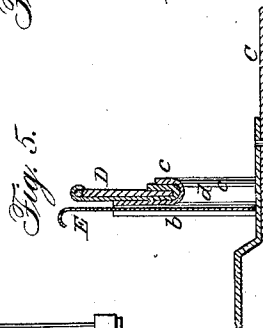


Fig. 5.

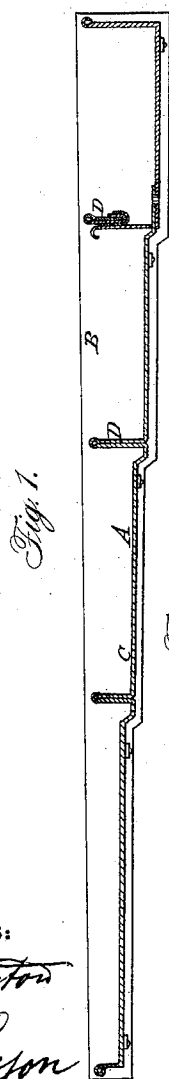


Fig. 1.

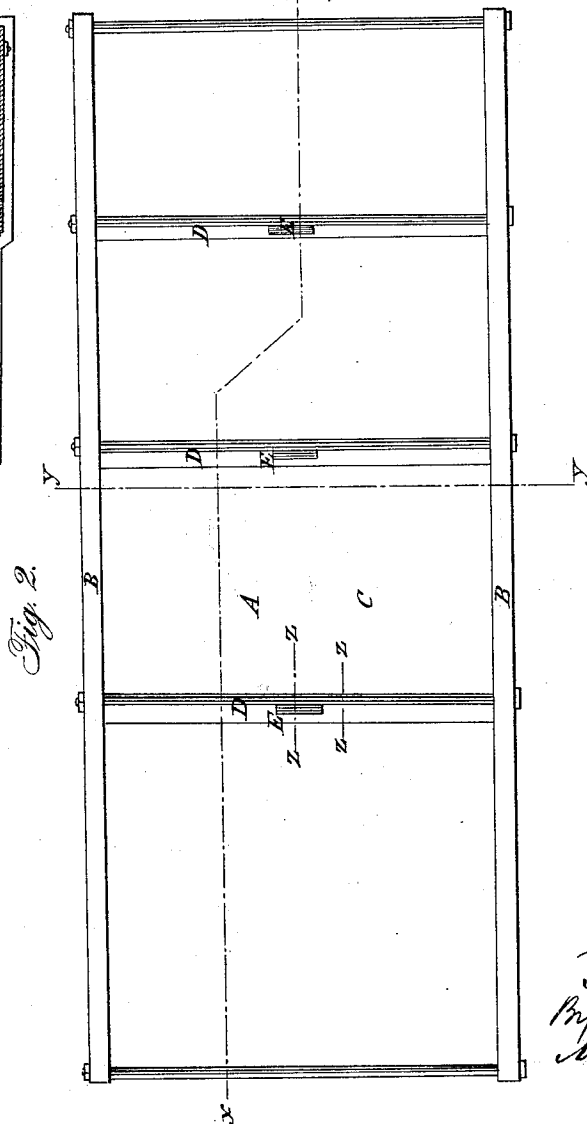


Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

J. COOPER, OF MOUNT VERNON, OHIO.

IMPROVED EVAPORATOR.

Specification forming part of Letters Patent No. 58,607, dated October 9, 1866.

To all whom it may concern:

Be it known that I, J. COOPER, of Mount Vernon, in the county of Knox and State of Ohio, have invented a new and Improved Evaporator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a longitudinal vertical section of this invention, the lines *a a*, Fig. 2, indicating the plane of section. Fig. 2 is a plan or top view of the same. Fig. 3 is a transverse vertical section of the same, taken in the plane indicated by the line *y y*, Fig. 2. Fig. 4 is a vertical section of one of the partitions, in a larger scale than the previous figures, the line *z z*, Fig. 2, indicating the plane of section. Fig. 5 is a similar section through the gate in one of said partitions, the plane of section being indicated by the line *z z*, Fig. 2. Fig. 6 is a horizontal section of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a pan for evaporating saccharine and other liquids which is provided with a sheet-metal bottom, and with partitions of gradually-increasing height, which are produced either by doubling the bottom up, or, if desired, the bottom can be in several sections, the ends of which are turned up and bent one over the other, and over suitable wires used for strengthening the top edges of the partitions. Each of the partitions is provided with one or more gates, which fit into guide-strips attached to the edges of the gate-openings, and these guide-strips are formed by turning over the edges of pieces of sheet metal, which are fastened to the partition by ears catching over the edges of the gate-openings.

A represents a pan intended for evaporating saccharine or other liquids. The sides B of this pan are made of wood, or any other suitable material, and to these sides the bottom C is fastened by nails or brackets, or by any other suitable means. Said bottom is made of sheet metal, copper or galvanized iron be-

ing used by preference, and it is so arranged that the depth of the pan increases gradually, as clearly seen in Fig. 1.

A series of transverse partitions, D, divide the pan in four (more or less) compartments and close in front of each partition. A well or depression, *a*, is formed in the bottom, whereby the effect of the heat on the pan is better and more economical than it is when the bottom of the pan is smooth and even throughout its entire length. The partitions are formed either by doubling up the bottom, if the same is made of one continuous sheet of metal, or, if the bottom is made in several sections, as will be generally the case in practice, the ends of each section are turned up and secured together by turning one end over the other, and, if desired, the top edges of the partition can be strengthened by wires, which are held in position by the edge of one section being turned over the same and over the edge of the other section, as shown in the drawings. Each partition is furnished with one or more gates, E, which move in suitable guide-strips V. These guide-strips are formed by turning up the edges of suitable metal plates, which are fastened in the gate-openings *d* by means of ears *c*, turned over the edge of said openings, as shown particularly in Fig. 5 of the drawings. By these ears the parts of the partitions in the neighborhood of the gate-openings are strengthened and made tight, and the guide-strips are firmly retained, so that they are not liable to break off or get deranged.

An evaporator can thus be constructed at a comparatively small expense and of superior durability and great economy in working the same.

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

The ears *c*, in combination with the guide-strips V, gate-openings *d*, and partitions D, constructed and operating substantially as and for the purpose described.

J. COOPER.

Witnesses:

F. L. FAIRCHILD,
C. G. COOPER.