J. E. GLOEKLER.

AIR COOLING APPARATUS.

APPLICATION FILED JUNE 23, 1909.

944,086. Patented Dec. 21, 1909.

Fig. 1.

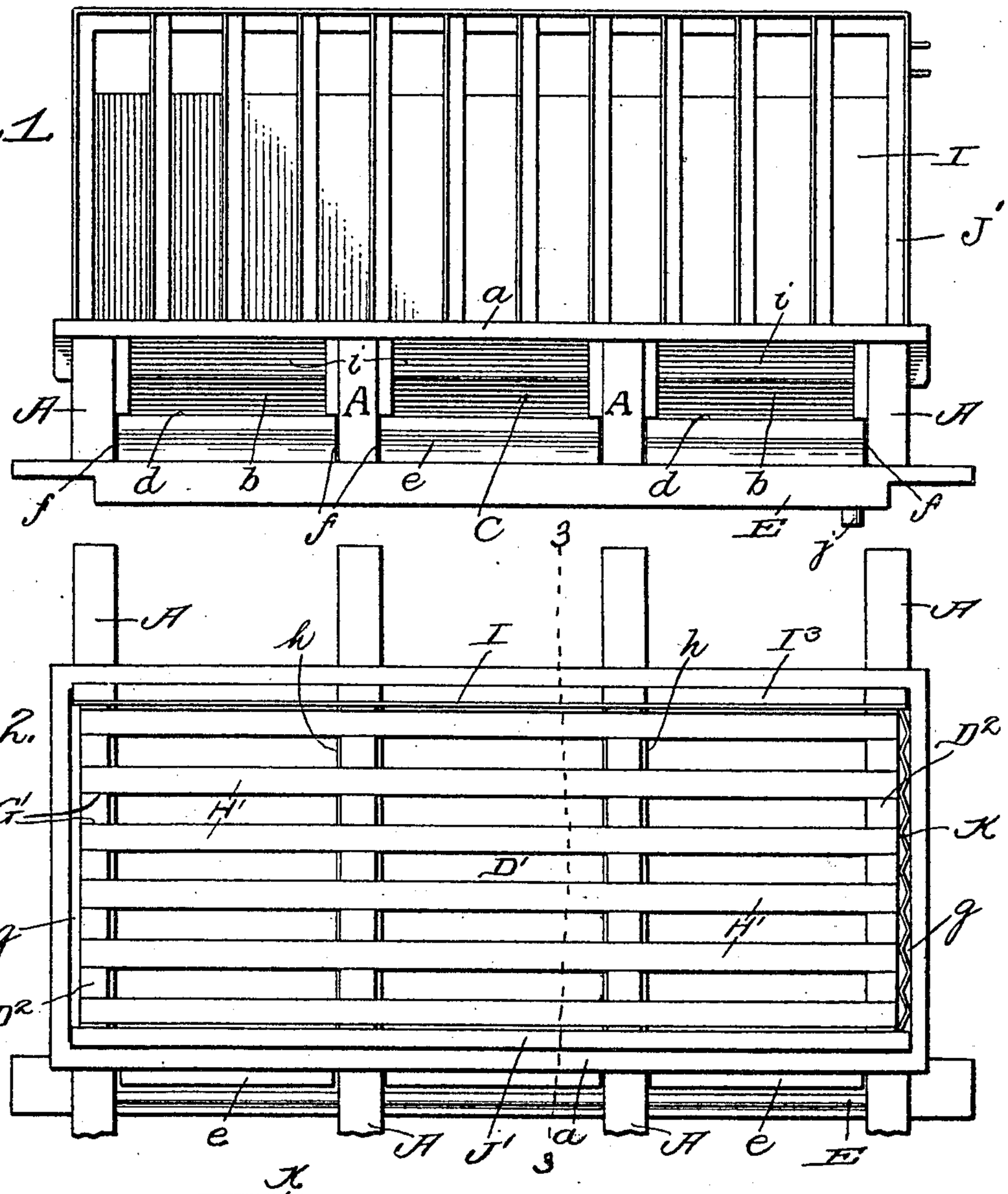


Fig. 2.

Fig. 3.

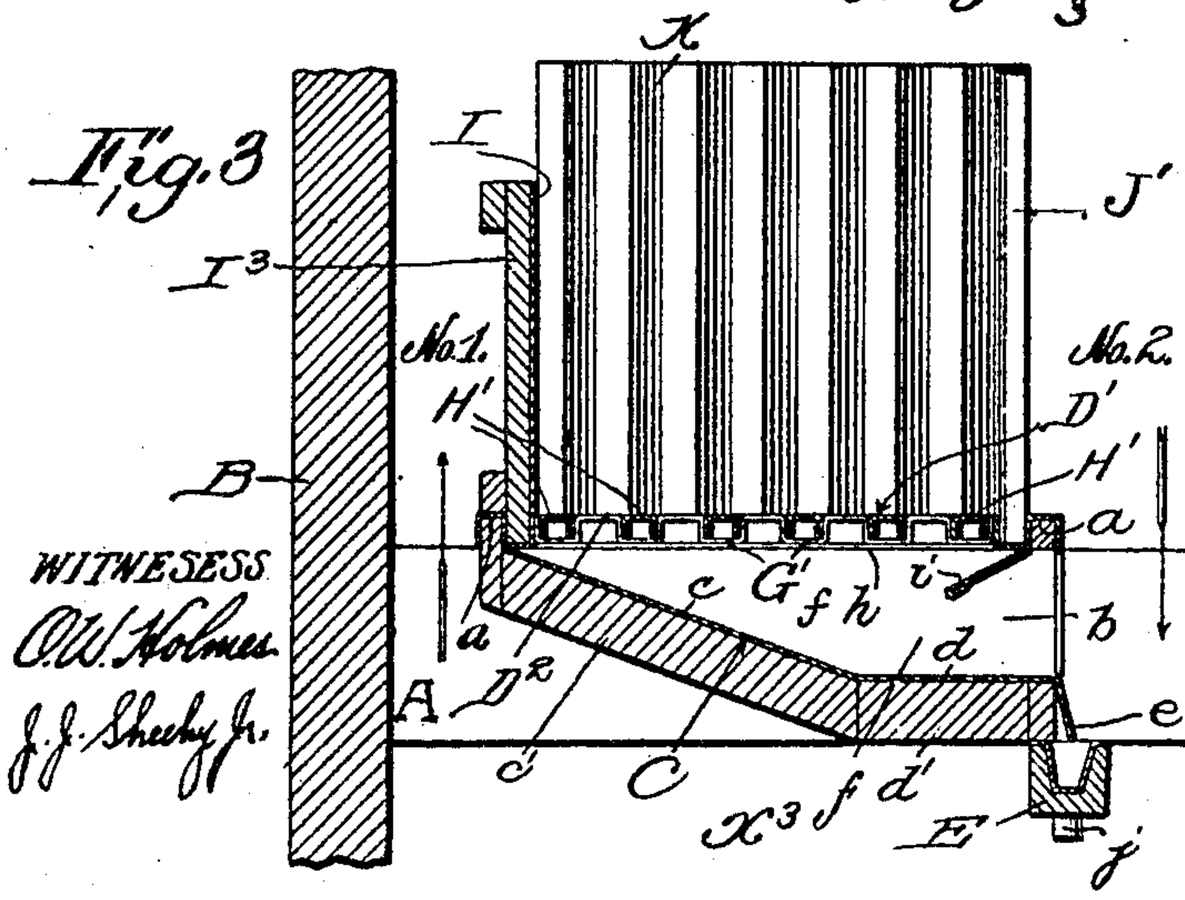
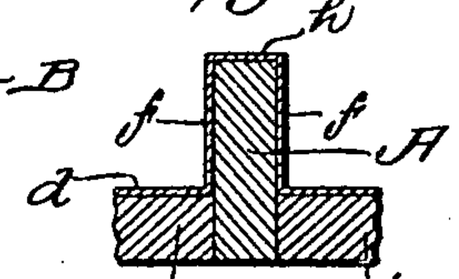


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN EDWARD GLOEKLER, OF PITTSBURG, PENNSYLVANIA.

AIR-COOLING APPARATUS.

944,086. Specification of Letters Patent. **Patented Dec. 21, 1909.**

Original application filed August 20, 1908, Serial No. 449,455. Divided and this application filed June 23, 1909. Serial No. 503,938.

To all whom it may concern:

Be it known that I, JOHN EDWARD GLOEKLER, citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Air-Cooling Apparatus, of which the following is a specification.

My present invention pertains to air cooling apparatus, and more particularly to gratings for supporting ice in such apparatus; and it contemplates the provision of an advantageous grating designed more particularly for use in an air cooling apparatus similar to that constituting the subject matter of my contemporary application, filed August 20, 1908, Serial Number 449,455 of which this application is a division.

With the foregoing in view, the present invention will be fully understood from the following description and claim when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a side elevation of the air cooling apparatus embodying my novel and advantageous grating. Fig. 2 is a plan view of the same. Fig. 3 is a transverse section taken in the plane indicated by the line 3—3 of Fig. 2. Fig. 4 is a detail section showing the arrangement of the metallic portions *h* of the conduit walls on the intermediate timbers A.

Referring by letters to said drawings: A A are timbers adapted to be fixed transversely in a refrigerator casing between opposite walls of the casing, Fig. 3. The said timbers A are separated by intervening spaces, Fig. 1, and arranged on and connected to the timbers is a pan C, formed entirely of suitable metal. The said pan comprises a rectangular frame *a* disposed above the timbers A, and conduits *b* arranged intermediate of the timbers A and fixed with respect to the said timbers and also with respect to said frame *a*.

By reference to Fig. 3, it will be noted that each conduit has an inclined bottom portion *c* which extends downwardly from one side bar of the frame *a* and in the direction of the width of the apparatus, and also has an approximately horizontal portion *d* which extends from the lower end of the inclined bottom portion and terminates in a depending flange *e*. It will also be noticed that the conduits *b* have side walls *f*, and that the outer side walls of the end conduits have flanges *g* which rest on and cover the end timbers A, while the other side walls of the conduits are connected by horizontal metallic portions *h* which rest on and cover the intermediate timbers A, Fig. 4. The side bar of the frame *a* above the bottom portions *d* of the conduits *b* is provided with downwardly and inwardly inclined flanges *i*.

On the horizontal portions *g* and *h* of the pan C is arranged my novel and advantageous grating D′, of metal, which has for its office to support the ice employed to cool air incidental to the passage of the latter through the apparatus, the scheme of the apparatus contemplating cooling the air which rises at the side No. 1, in Fig. 3, and then permitting the cold and heavy air to descend through the grating D′ and the conduits *b*, and to pass back to the storage chamber through the spaces at the side No. 2 of the apparatus, and the conduits *b* serve the additional function of carrying the water from the melting ice to a trough E, having a conduit *j* designed to carry such water outside of the refrigerator or the like. The under sides of the bottom portions *d* and *e* of the conduits *b* are covered and insulated by horizontal strips *d*′, of wood, and inclined strips *e*′, also of wood. The grating D′ serves in combination with an imperforate side wall I, an open-work side wall J′, and an imperforate back wall K, all of metal, to form an ice receptacle; the wall I being provided with an insulating backing I³, of wood or other suitable material.

With the exception of the specific grating D′ and the specific open-work wall J′, the apparatus illustrated and hereinbefore described is similar to the apparatus disclosed in my contemporary application hereinbefore referred to, and like said apparatus is arranged in a refrigerator casing between opposite walls B thereof and between the closed top of the casing and the provision or storage chamber indicated by X³ in Fig. 3.

My novel grating D′ comprises a metallic frame D² arranged and permanently secured on the horizontal portions *g* and *h* of the pan C and having longitudinally disposed seats G′, of U-shape in cross-section, at intervals of its length, and longitudinal me-

tallic bars H′, which are arranged in and are adapted to be removed, one by one, from the said seats G′. Thus it will be manifest that when it is desired to clean the apparatus, each of the bars H′ may be removed independently of the others and after being cleaned may be quickly and easily replaced in position in and on the frame D^2; and it will also be understood that when all of the bars H′ are removed, ready access may be gained to all parts of the pan C and frame D^2 to facilitate the thorough cleaning thereof. The bars H′ are of inverted U-shape in cross-section, this formation being materially advantageous inasmuch as it gives considerable surface to the bars in proportion to the small amount of metal embodied in the bars and the lightness of the same, and at the same time enables the bars to shed water and sediment, with the result that the apparatus is at all times in a good sanitary condition. It will also be manifest that the bars H′, of inverted U-shape in cross-section, are stiff and strong, and hence are possessed of great weight-bearing capacity in proportion to the amount of metal comprised therein.

In addition to the practical advantages hereinbefore ascribed to the novel grating D′, it will be noted that the said grating may be quickly and easily manufactured, and that it is adapted to last quite as long as the remainder of the apparatus in which it is comprised.

The construction herein illustrated and described constitutes the best practical embodiment of my invention of which I am cognizant, but it is obvious that in the future practice of the invention such changes or modifications may be made as do not involve departure from the scope of my invention as claimed.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

A grating for the purpose described, comprising a suitably supported metallic frame having longitudinally disposed seats, of U-shape in cross-section, at its ends and at intervals of its length, and longitudinal, metallic bars, of inverted U-shape in cross-section and uniform height throughout their lengths, extending from end to end of the metallic frame and each snugly fitting in end and intermediate seats of the frame and adapted to be individually removed from the frame and replaced therein.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN EDWARD GLOEKLER.

Witnesses:

JOSEPH F. KRISS,

WM. H. BAUMANN.