W. H. KUDER.

DRIER.

APPLICATION FILED OCT. 16, 1919.

1,363,130.

Patented Dec. 21, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

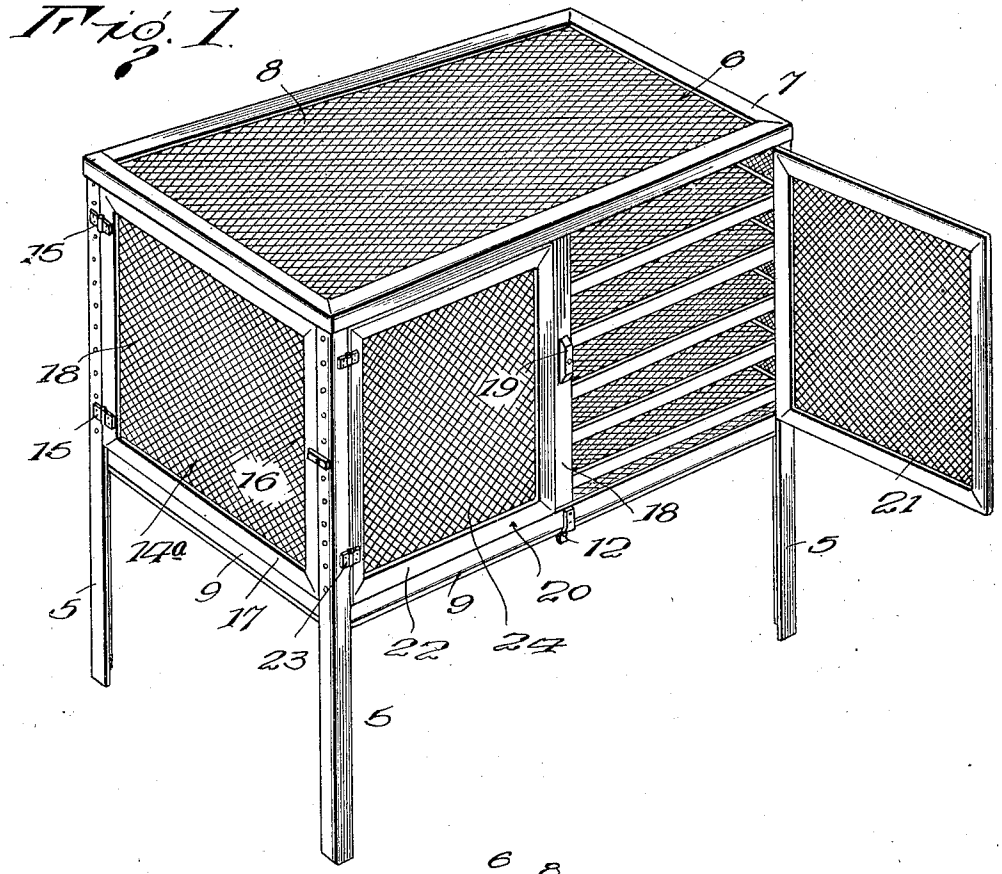
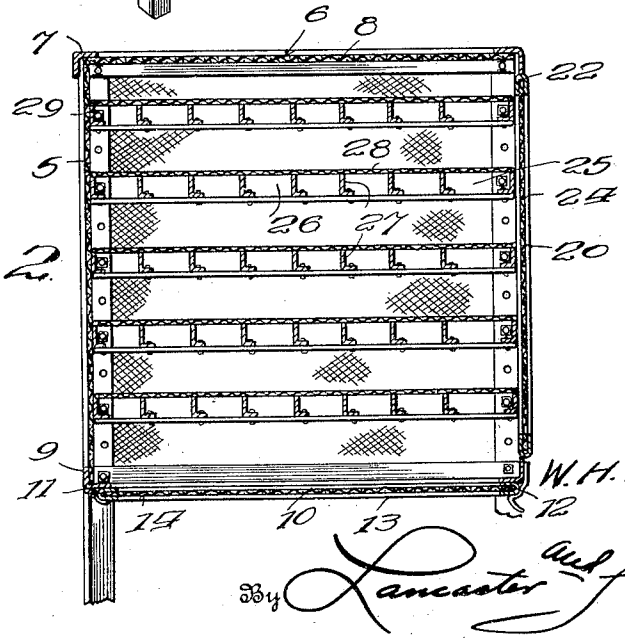


Fig. 2.



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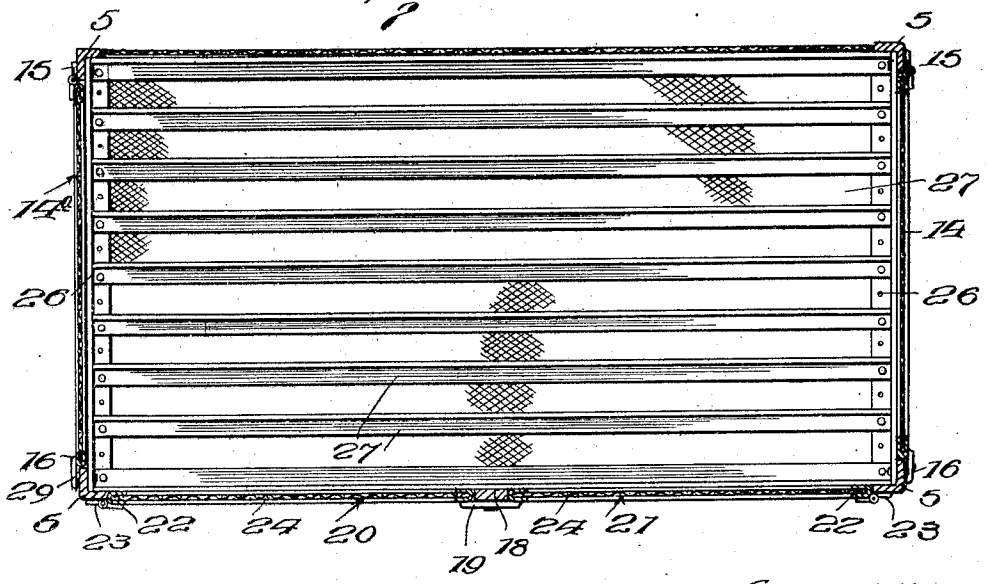
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2 SHEETS—SHEET 2.

Fig. 3.



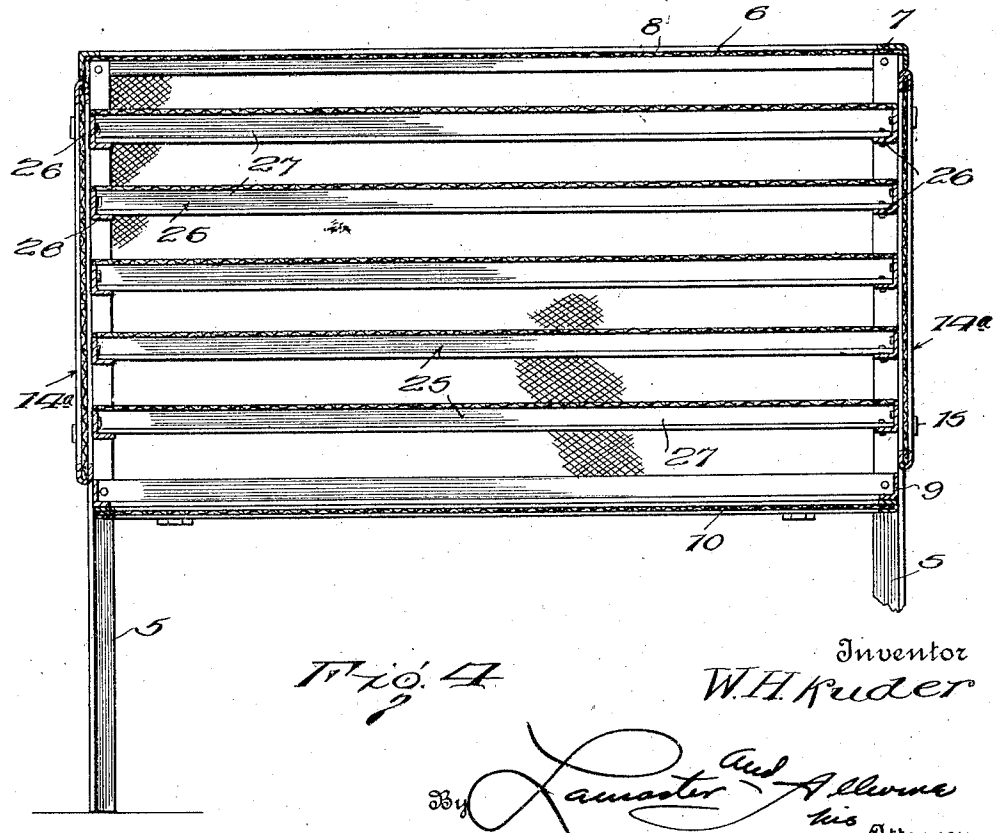


Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM HENRY KUDER, OF JOLIET, ILLINOIS.

DRIER.

1,363,130. Specification of Letters Patent. Patented Dec. 21, 1920.

Application filed October 16, 1919. Serial No. 331,122.

To all whom it may concern:

Be it known that I, WILLIAM H. KUDER, a citizen of the United States, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Driers, of which the following is a specification.

This invention relates to driers, particularly designed for drying fruits, grain or analogous material, and an object of the invention is to provide a drier constructed of mesh work or screen, which will permit the free circulation of air therethrough to facilitate the evaporating of the moisture in the substance being dried.

More specifically, the invention comprehends the provision of a drier including a suitable supporting structure having a top and rear wall rigidly attached thereto, and having end walls hingedly connected to the supporting structure, and a front wall or side formed of a pair of hingedly connected doors, and also to provide a bottom formed of mesh work or screen, which is hingedly connected to the supporting structure and may be dropped downwardly to facilitate the cleaning of the drier.

A still further object of the invention is to provide article supporting racks for the drier which will support the material to be dried in such manner as to prevent the sagging or warping of the supporting surfaces of the rack.

Other objects of the invention will appear in the following detailed description taken in connection with the accompanying drawings, forming a part of this specification, and in which drawings:

Figure 1 is a perspective view of the improved drier.

Fig. 2 is a vertical section through the drier.

Fig. 3 is a horizontal section through the drier, and

Fig. 4 is a longitudinal vertical section through the drier.

Referring more particularly to the drawings, wherein like characters indicate like and corresponding parts throughout the several views, the drier includes a main supporting structure, comprising a plurality of supporting legs 5, which have a cover 6 attached to their upper ends. This cover 6 is constructed of a rectangular frame 7 of angle iron, which has a screen netting or mesh work 8 attached thereto, forming a top for the drier which will permit the free circulation of air therethrough. The legs 5 are braced, intermediate their ends by a plurality of angle iron braces 9, extending from one leg to the other and the bottom 10 of the drier is hingedly connected, at its rear edge as shown at 11, to the angled bar 9 which extends across the rear end of the drier. The forward free edge of the bottom 10 of the drier is supported, by a suitable cap structure 12 to support the bottom in its horizontal closing position and this cap structure is adapted to be released, to permit the bottom 10 to drop downwardly upon its hinges 11 to facilitate the cleaning thereof. The bottom 10 is composed of frame work 13 and a screen 14, extending entirely across the bottom and forming the major portion thereof. The ends of the drier are formed by sections 14^a hingedly connected as shown at 15 to the rear corner legs 5 and suitable buttons or catches 16 are provided to hold these end doors closed. The end doors 14^a like the bottom 10 are formed of frames 17 which carry sheets of foraminous materials or screens 18 to permit circulation of air longitudinally through the drier. The forward part of the drier is braced intermediate its ends by a vertical brace 18 which carries a button or suitable fastener 19 employed for holding the door sections 20 and 21 closed. These door sections 20 and 21 which make the front side of the housing of the drier include frames 22, which are hingedly connected as shown at 23 to the forward corner portion 5, and which carry foraminous panels 24. A plurality of racks 25, are positioned within the drier at vertically spaced intervals, and each of these racks comprise end supporting angled irons 26, to which a plurality of angled irons 27 are attached, at spaced intervals. The angled irons 27 extend throughout the entire length of the racks and are spaced laterally, the upper edges of their vertical portions providing supports for the screen trays 28, which carry or support the fruits, grain or analogous articles to be dried. These racks 25 are attached to the supporting body of the drier. in any suitable manner, such as by bolts 29, which extend through the end angle bars 26 at each rack and the corner leg 5.

As clearly shown in the drawings, the longitudinally extending angle iron braces 27, are spaced at relatively short intervals

across the width of the trays so as to form supports for the foraminous or screen trays 28 to prevent the sagging of the screen under the weight of the articles to be dried.

Changes in details may be made without departing from the spirit of this invention, but

I claim:

1. In a drier, the combination of a supporting structure, foraminous sides, top and bottom therefor, a plurality of racks supported in horizontal spaced relation within said drier body, said supporting racks comprising a plurality of angle irons, and a sheet of screen upon said angle iron.

2. In a drier, the combination of a supporting structure including a plurality of supporting legs, a foraminous top attached to the upper ends of said legs, ends for the drier hingedly connected to certain of the legs and comprising foraminous panels, means for holding said hinged ends in closed position, a front side for said drier comprising a plurality of hingedly mounted sections each comprising a frame and a foraminous panel, and a plurality of trays supported within said drier.

3. In a drier, the combination of a supporting structure including a plurality of supporting legs, a foraminous top attached to the upper ends of said legs, ends for the drier hingedly connected to certain of the legs and comprising foraminous panels, means for holding said hinged ends in closed position, a front side for said drier comprising a plurality of hingedly mounted sections each comprising a frame and a foraminous panel, a plurality of racks supported within said drier, each of said racks comprising end angled bars, a plurality of supporting angled bars attached to said end angled bars and extending longitudinally of the trays, and sheets of screens mounted upon the upper edges of said longitudinally extending bracing angled bars.

4. In a drier, the combination of a supporting structure including a plurality of supporting legs, a foraminous top attached to the upper ends of said legs, ends for the drier hingedly connected to certain of the legs and comprising foraminous panels, means for holding said hinged ends in closed position, a front side for said drier comprising a plurality of hingedly mounted sections each comprising a frame and a foraminous panel, a plurality of racks supported within said drier, each of said racks comprising end angled bars, a plurality of supporting angled bars attached to said end angled bars and extending longitudinally of the trays, and sheets of screens mounted upon the upper edges of said longitudinally extending bracing angled bars, a bottom for said drier comprising a frame work hingedly connected at its rear edge to the supporting structure of the drier, a foraminous panel carried by said frame, and means engaging the forward edge of said bottom to retain it in a horizontal bottom forming position, and to permit the bottom to be swung downwardly upon its hinged support for cleaning.

5. In a drier, the combination of a supporting structure, a foraminous top carried by said supporting structure, foraminous ends for the drier hingedly connected to the supporting structure, means for maintaining said ends in end forming position, the front side of said drier composed of a plurality of hingedly connected sections each comprising a frame work and a transparent panel, means for holding said front hinged sections closed, a bottom comprising a frame, means hingedly connecting said frame at its rear edge to said supporting structure, a foraminous panel carried by said frame, and a snap carried by the supporting structure for engaging the forward edge of the bottom to hold it in a horizontal position.

WILLIAM HENRY KUDER.