

(No Model.)

2 Sheets—Sheet 1.

J. F. DORNFELD.
MALTING FLOOR.

No. 532,545.

Patented Jan. 15, 1895.

Fig. 1.

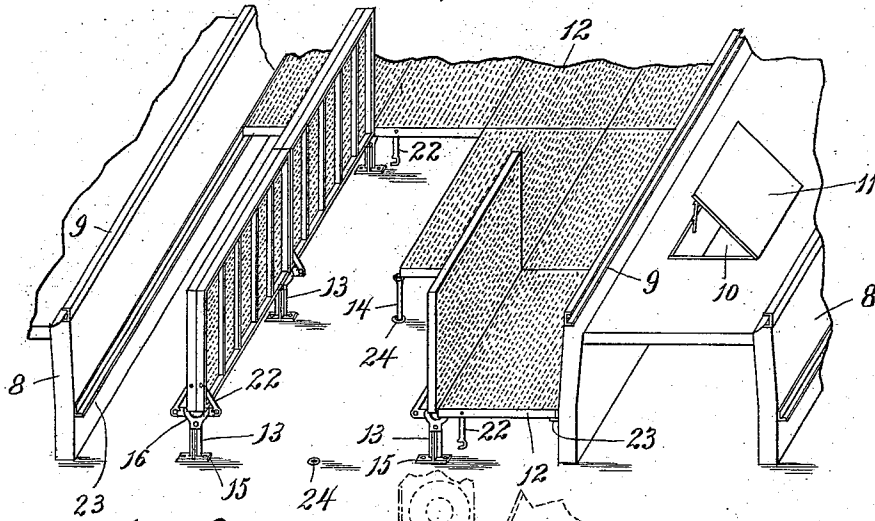
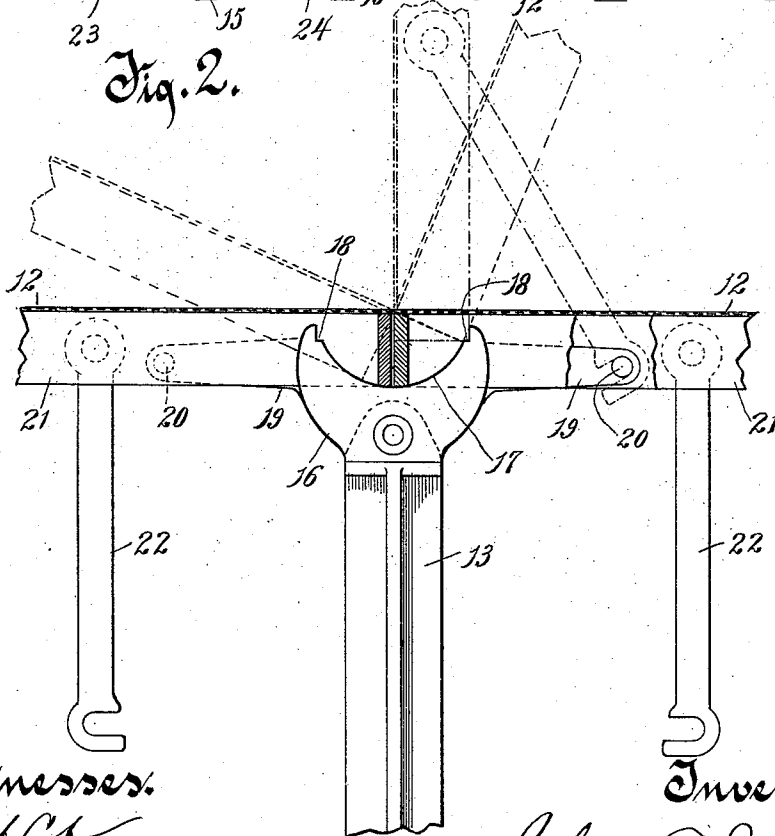


Fig. 2.



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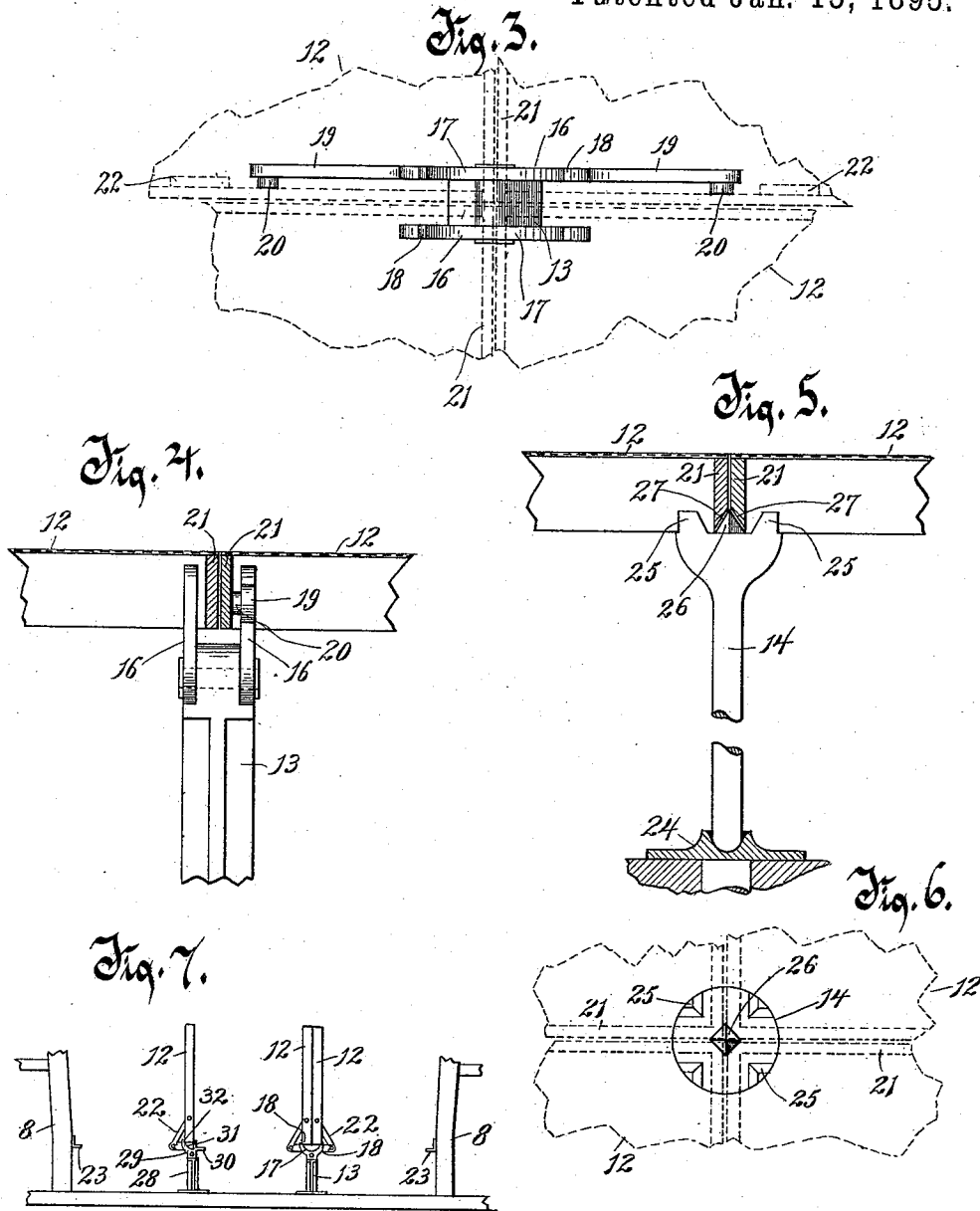
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Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN F. DORNFELD, OF CHICAGO, ILLINOIS.

MALTING-FLOOR.

SPECIFICATION forming part of Letters Patent No. 532,545, dated January 15, 1895.

Application filed September 4, 1894. Serial No. 522,061. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. DORNFELD, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Malting-Floors, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in malting floors.

In perforated malting floors it is necessary that the under side thereof should be thoroughly cleaned at frequent intervals. Heretofore, this has only been accomplished with considerable difficulty.

It is one of the objects, therefore, of my invention to provide a sectional malting floor so constructed and arranged that the above-described end can be attained with but the expenditure of the slightest trouble and time, the sections being all of one shape and size, and capable, when necessary, of being removed separately, without disturbing or disarranging in the least any of the other sections.

With the above and other objects in view the invention consists of the devices and parts, or their equivalents, as hereinafter more fully described and claimed.

In the accompanying drawings, Figure 1, is a perspective view of my invention, illustrating four longitudinal lines of sections, some of said sections being shown as thrown up vertically, for the purpose of permitting the under sides thereof to be cleaned. Fig. 2, is a fragmentary end elevation, a part being broken away, and showing several dotted line positions of the sections. Fig. 3, is a plan view at a point where one of the legs supports the corners of four adjacent sections, said sections being shown in dotted lines. Fig. 4, is a view of the leg illustrated in Fig. 2, at right angles to the position shown in said figure. Fig. 5, is a view, partly in section, of one of the intermediate legs. Fig. 6, is a plan view of the leg illustrated in Fig. 5, the sections of floor being shown in dotted lines, and Fig. 7, is a front elevation showing an arrangement for three longitudinal lines of sections.

Like numerals of reference denote like parts throughout the several views.

Referring to the drawings, the numerals 8,

8, indicate side boxes or air flues which rest upon the floor proper of a malting room, and between which boxes the malting floor hereinafter described is arranged. Tracks 9 are secured to the tops of the boxes, upon which tracks a carriage is adapted to travel. These side boxes or flues are provided with top openings, such as 10, regulated by means of lids or covers 11. To these boxes attemperated air is fed, said air passing through the openings 10, and thence drawn down to and through the openings of the malting floor to the space between the under side of said malting floor and the floor proper of the room. From these spaces suitable exhaust passages (not shown) conduct the air.

The malting floor is composed of a series of perforated sections 12, of the same size and shape, said sections arranged in a series of longitudinal lines, as clearly shown in Fig. 1.

Referring now particularly to the arrangement shown in Fig. 1, the numeral 13 indicates a series of legs arranged in two longitudinal lines, and the numeral 14 a series of supporting legs arranged in a longitudinal line intermediate the two lines of legs 13. The latter legs are provided with lower flanges 15, which are securely bolted to the floor proper. Secured at the upper ends of these legs, upon opposite sides are castings 16, 16, which have their top edges semi-circularly recessed, as indicated at 17, the ends of said semi-circular recesses being shouldered, as indicated at 18, 18. The inner one of each of these castings is formed or provided with a transverse bar 19, which bar in turn is provided at opposite ends with laterally-projecting fingers 20, 20.

The sections of floor are provided with depending rims 21, the adjacent edges of which rest in the semi-circular recesses 17 of the castings 16. Hooks 22 depend from one end of each section of floor, said hooks adapted to engage the laterally projecting fingers 20, as hereinafter explained. As will be seen from Fig. 1, the inner edges of the outer lines of sections, and the outer edges of the inner lines of sections are supported upon the legs 13, while the outer edges of the outer sections are supported on ledges 23 secured to the side boxes, and the inner edges of the inner sections upon the legs 14. These legs 14 fit loosely and removably in sockets 24 secured

to the floor of the malting room. Their upper ends are enlarged, and upon the flat circular top of each enlargement is formed a series of annular edge lugs 25, and a central
 5 pyramidal lug 26. Each one of the sections has the lower edge of a part of its rim cut away, as indicated at 27, said cut away portions conforming to and adapted to fit against
 10 one of the triangular sides of the pyramidal lugs, whereby the legs 14 are maintained in perpendicular position. As the legs 14 fit loosely and removably in their sockets, it is obvious that when all the four sections are removed from engagement with one of these
 15 legs said leg is no longer supported, and hence does not stand upright. If, however, only one section of malting floor is in engagement with a leg 14, said leg will be maintained upright by reason of the provision of the lugs
 20 25. Inasmuch as the central line of legs 14 are thus made readily removable, it is obvious that the two inner longitudinal lines of sections may be readily removed at any time, and the space utilized for other purposes, if
 25 desired.

In Fig. 1 of the drawings a number of the sections 12 are shown as supported in their raised or vertical positions for the purpose of gaining access to and cleaning the bottoms thereof. In Fig. 2, the manner of accomplishing this is clearly illustrated. In the inclined dotted line position on the right of Fig. 2 the section is shown as raised sufficiently to permit its edge to engage the shoulder 18. As
 30 the section is raised the hook 22 is, of course, raised therewith, and when the section assumes the vertical dotted line position, said hook will engage the laterally-projecting finger 20, whereby the section is maintained in its
 35 raised vertical position. All the other sections are raised in exactly the same manner, each section resting upon its respective shoulder 18, and supported by its respective hook 22 engaging one of the fingers 20.

In Fig. 7 is shown an arrangement by means of which only three longitudinal lines or sections may be employed. In this form, the legs 13 are disposed only in one longitudinal line, while another line of legs 28 are
 40 placed parallel thereto, said line of legs having castings 29 secured thereto, the castings having horizontally-projecting lugs 30 extending from one side, and upward-curved fingers 31, provided with shoulders 32, projecting from the other side. Only one line
 45 of sections are raised upon these legs 28. The outer edges of the sections when in their horizontal positions rest upon the ledge 23 of the side box adjacent. The edges of the sections
 50 of the supporting legs 13, rest, respectively, upon the ledge 23 of the other side box and the horizontal projecting lugs 30 of the castings 29.

When it is desired to use only two longitudinal lines of sections, it is obvious that

only the supporting legs 13 are employed, and the outer edges of the sections under such circumstances rest directly on the ledges 23.

From the above description it will be seen that I provide a construction of malting floor
 70 wherein the cleaning of the underside thereof may be readily accomplished. The sectional floor can also be made of any width, and when desired the sections can be separately removed and replaced by others, when
 75 damaged, or otherwise impaired, without the necessity of disarranging any of the remaining sections.

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

1. The combination, with supporting legs provided with shoulders and with projecting fingers, of floor sections normally resting horizontally on the legs, said sections provided
 85 with depending hooks, which, when the sections are raised to vertical positions and rest upon the shoulders, engage the projecting fingers, and maintain said sections in their vertical positions, substantially as set forth. 90

2. The combination, of supporting legs having recesses at their upper ends provided with end shoulders, a transverse bar provided with laterally-extending fingers, floor sections provided with depending rims, the rims of ad-
 95 joining sections resting in the recesses of the legs, and hooks pivoted to the sections, and adapted, when the sections are raised to vertical positions and rest upon the shoulders, to engage the projecting fingers, and main-
 100 tain said sections in their vertical positions, substantially as set forth.

3. The combination, with supporting legs fitting loosely and removably in sockets, each leg having its upper end provided with edge
 105 lugs, of floor sections provided with depending rims adapted to fit over the edge lugs of the legs, substantially as set forth.

4. The combination, with supporting legs fitting loosely and removably in sockets, each
 110 leg having its upper end provided with edge lugs and with a central pyramidal lug, of floor sections provided with depending rims, said rims fitting over the edge lugs, and having cut-away portions fitting against the sides of
 115 the central pyramidal lug, substantially as set forth.

5. The combination, of supporting legs arranged at a distance apart in longitudinal lines, a series of floor sections also arranged
 120 in longitudinal lines and supported on said legs, and mechanism carried by the floor sections and by the supporting legs, respectively, and adapted, when the floor sections are turned up to vertical positions for cleaning
 125 purposes, to engage or interlock, whereby the sections are retained in their vertical positions, substantially as set forth.

6. The combination, of supporting legs arranged in longitudinal lines, said legs pro- 130

vided with shoulders and with projecting fingers, a series of floor sections also arranged in longitudinal lines and normally resting horizontally on the legs, and hooks pivoted to the floor sections, which hooks, when the sections are raised to vertical positions and rest upon the shoulders, engage the projecting fingers, and maintain said sections in vertical positions, substantially as set forth.

7. The combination, of supporting legs having recesses at their upper ends, said recesses provided with end shoulders, a series of floor sections supported on said legs, and mechanism, adapted, when the floor sections are turned up to vertical positions and rest on the shoulders of the recesses, to lock said sections

in their vertical positions, substantially as set forth.

8. The combination, with supporting legs, provided with projecting fingers, of floor sections normally resting horizontally on the legs, said sections provided with depending hooks, which, when the sections are raised to vertical positions, engage the projecting fingers, and maintain said sections in their vertical positions, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN F. DORNFELD.

Witnesses:

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ANNA V. FAUST.