

Oct. 3, 1933.

R. T. KORB

1,929,319

DRYING RACK

Filed April 12, 1930

2 Sheets-Sheet 1

Fig. 1.

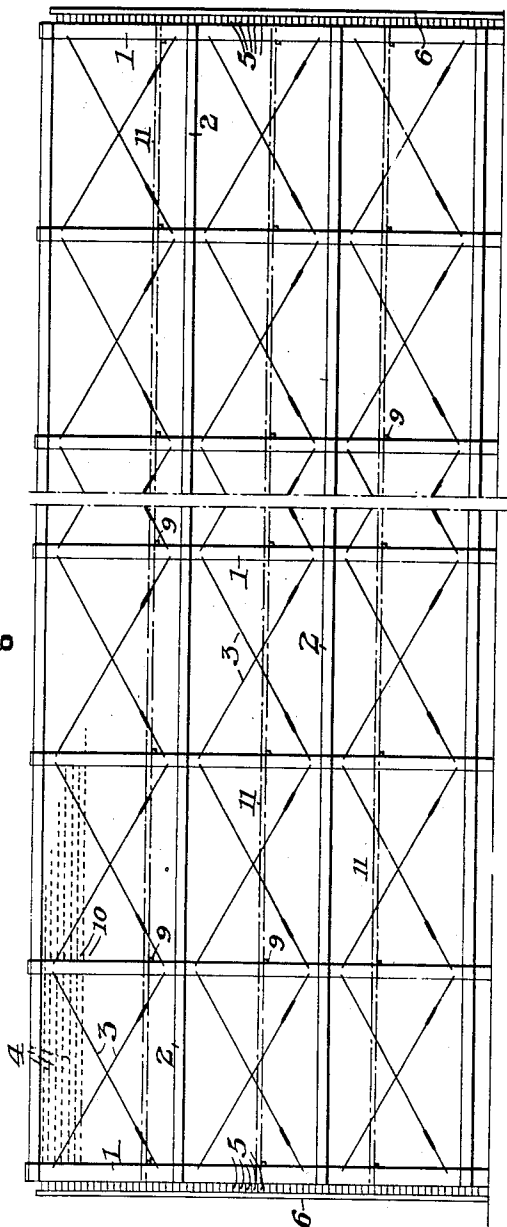


Fig. 3.

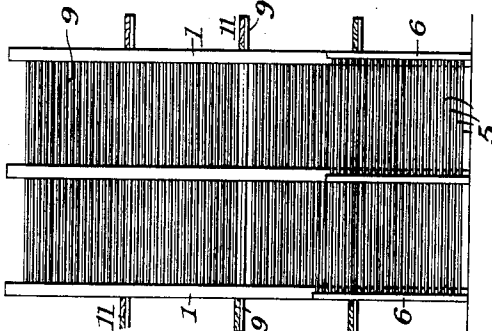


Fig. 2.

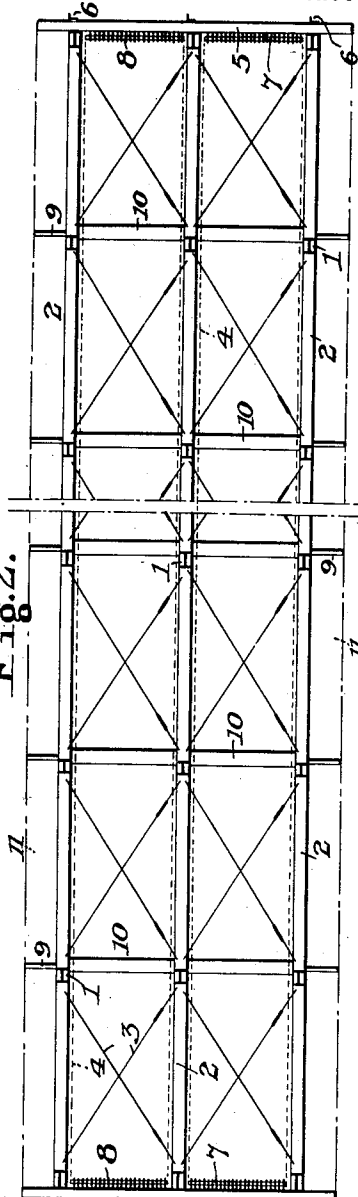
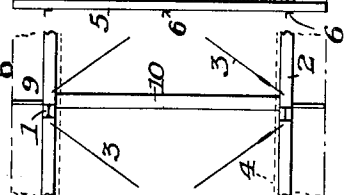


Fig. 4.



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Fig. 5.

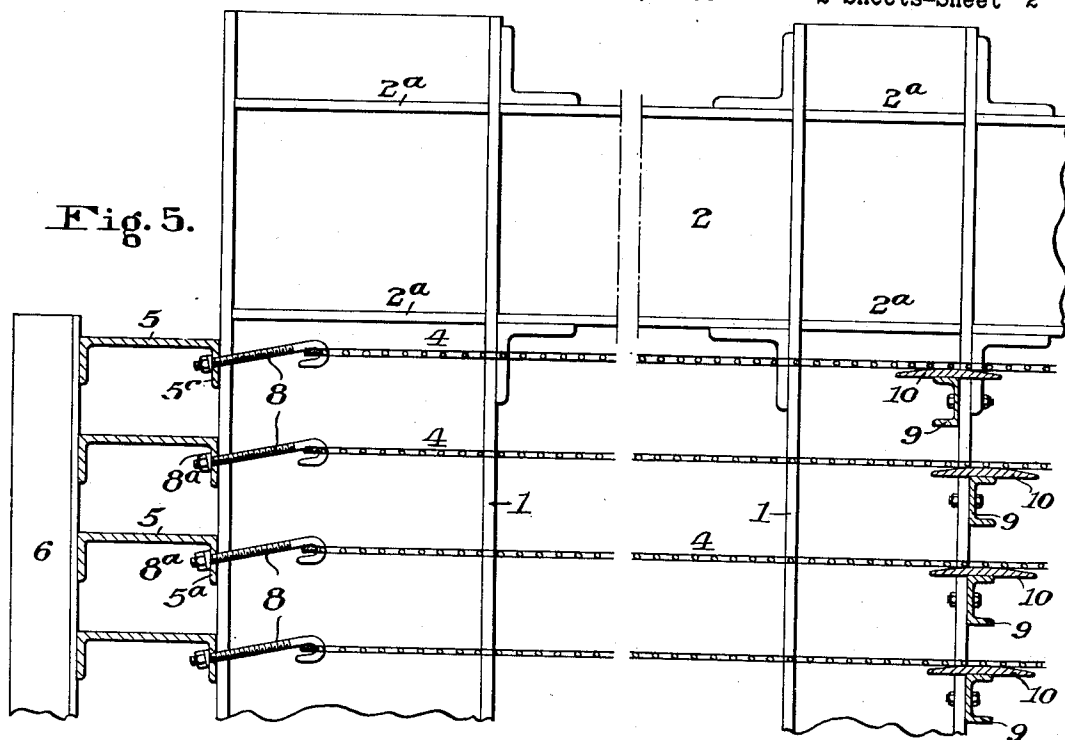


Fig. 6.

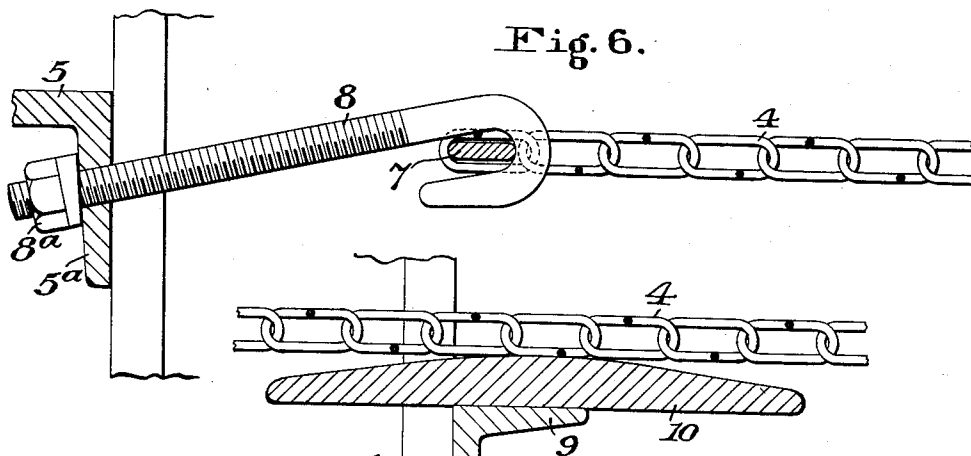
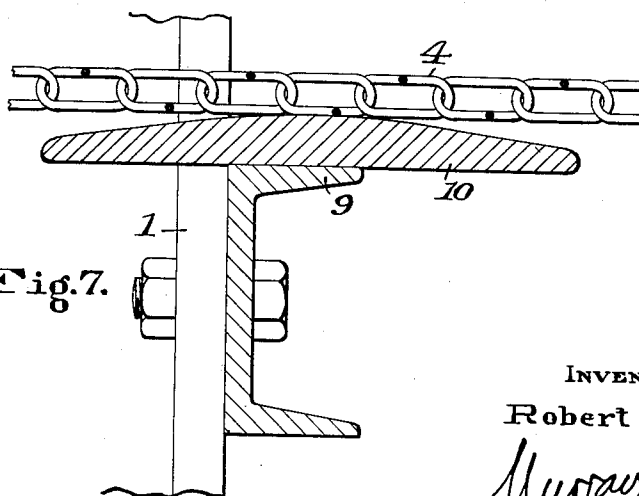


Fig. 7.



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UNITED STATES PATENT OFFICE

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DRYING RACK

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Application April 12, 1930. Serial No. 443,862

8 Claims. (Cl. 211—134)

This invention relates to racks or supporting frames for the drying and seasoning of strip material in sheets and/or continuous lengths, and the principal object of the invention is to provide an improved form of rack for the support of linoleum in continuous lengths while it is drying and seasoning.

A further object of my invention is to provide an improved form of supporting shelves upon which strip material or the linoleum lengths may be laid in the racks or frames; such supporting shelves being in the form of continuous elements of a foraminous character whereby the desired support with complete ventilation is provided for.

And a still further object of my invention is to provide improved means for supporting the foraminous shelves upon which the strip material or linoleum lengths are laid during drying and seasoning.

These and other features of my invention are more fully described hereinafter; reference being had to the accompanying drawings, in which:

Figure 1 is a side elevation, largely diagrammatic, of a rack or supporting frame within the scope of my invention; partly broken away in view of the great length.

Fig. 2 is a plan view of the rack or frame shown in Fig. 1.

Fig. 3 is an end view of the rack shown in Figs. 1 and 2.

Fig. 4 is a fragmentary view illustrating a modification within the scope of my invention.

Fig. 5 is an enlarged view, partly in section, of part of one end of the rack or frame.

Fig. 6 is an enlarged sectional view of a portion of the structure illustrated in Fig. 5, and

Fig. 7 is a sectional view, on a still larger scale, of one of the supports for the continuous foraminous shelves.

Linoleum is produced in continuous length approximately one hundred and eighty (180) feet in length and in various widths which may range from six (6) to twelve (12) feet, or more. The improved rack or frame forming the subject of my invention is designed to support these continuous lengths in a substantially flat, horizontal position. The rack or frame therefore is slightly greater than one hundred and eighty (180) feet in length, approximately fifteen (15) feet in width in order to provide continuous shelves capable of receiving material of extra width and upon which groups or layers of the continuous lengths of linoleum or other material may be laid for drying and seasoning, and it may be

thirty (30) or more feet in height. When such height is provided for it may have a great many, seventy (70) or more, of the foraminous shelves upon each of which three or four (or more) of the continuous lengths of linoleum or strip material in any length may be placed.

The rack or frame is made of structural metal and may comprise a series of vertical beams 1 of I, H, or other form arranged a suitable distance apart, which beams or posts are braced and stayed longitudinally of the structure by a series of horizontally disposed structural sections 2; such arrangement providing a series of panels and the vertical beams or posts 1 may be further braced and stayed by adjustable tension rods 3 diagonally placed in the respective panels. Inasmuch as the rack or frame is subject to enormous strains longitudinally, it is preferable to brace the flanges of the vertical beams or posts longitudinally thereof, and for this purpose flat plates 2^a, aligned with the flanges of the longitudinal sections 2 may be welded or otherwise secured between the said flanges of the vertical beams or posts.

The supporting shelves for the continuous lengths of linoleum or other material consist of continuous lengths of wire fabric, indicated at 4, and preferably of the type made up of interconnected helically formed cross wires whose ends are suitably connected together. This wire fabric is of well known type.

In Figs. 2 and 3 I have shown a structure arranged to provide two sets or series of vertically arranged shelves side by side; the rack or frame having a central line of vertical posts transversely aligned with the other vertical posts making up the rack or frame. In Fig. 4, I have shown a fragmentary view of a form of rack of the full width indicated in Figs. 2 and 3, but in which the central row of vertical posts is omitted; such form of structure being available to take sheets or lengths of a dimension up to double the width of material which may be accommodated by the arrangement of shelves indicated in Figs. 2 and 3.

The sections of wire fabric are held at each end and maintained in a relatively taut condition. For this purpose a series of horizontally disposed structural members 5, which may be channels, are provided at each end of the frame and connected to the vertical beams or posts at such ends. Beyond the ends of the frame these members 5 are braced and stayed by vertically disposed structural members 6. The helically formed cross wires at the ends of the continuous sections of wire fabric receive cross bars 7 extending the

full width of the wire fabric and these bars are caught by hooked bolts 8 angularly disposed and passed through the adjacent flanges 5^a of the members 5; being held to such flanges by nuts 8^a which also serve to take up slack in the wire fabric lengths. These hooked bolts are connected to the cross bars 7 at regular intervals and, preferably, not less than six inches apart.

Should the wire fabric sections expand unduly, a sufficient number of the helically formed wires making up the same may be removed and the cross bar reset at the new end provided. In practice there is little necessity for removing these wires since, being of metal, the expansion and contraction of the wire fabric follows the expansion and contraction of the frame or rack.

It is necessary of course to support the wire fabric shelves at intervals throughout their length and means for such purpose are clearly shown in Figs. 5 and 7. The vertical beams or posts are cross-braced by a series of structural members 9 suitably connected to the same; the arrangement of such members and their vertical spacing being such that sufficient room is provided for the reception of three or four more continuous lengths of linoleum or other material superposed upon each other. In order to give the wire fabric a substantially smooth support over these members 9, rounded pillow members 10 are placed thereon and welded or otherwise secured thereto; such pillow members having a convex upper surface upon which the wire fabric rests, as shown in Fig. 6. The width of these pillow members is such that the wire fabric may be properly supported without the formation of a rib to mark and mar the linoleum or other material, for even though the wire fabric may sag slightly between successive pillow member supports, the convexity of the same prevents the formation of sharp corners or edges and avoids damage to the linoleum or other material. The members 10 illustrated in Figs. 2 and 3 lie transversely between the central and the outer rows of posts in two sections, while those illustrated in Fig. 4 are of full width; lying between the outer rows of posts.

The height of the structure necessitates the provision of means for gaining access to the several shelves and I may arrange a series of platforms at various heights along the sides of the rack by extending certain of the cross members 9 beyond the sides of said frame and placing treads 11 thereon, as shown in Figs. 1, 2 and 3. Any means of mounting these platforms may be provided.

The wide open mesh of the wire fabric provides for complete circulation of air and insures ample ventilation for the linoleum or other material during drying and seasoning. These racks or frames are usually placed in a heated chamber and the linoleum or other material is left in the same for the desired period necessary to effect drying and seasoning. During this time the rack or frame and the wire fabric shelves expand under the heat present, but as all parts are of metal this expansion is substantially uniform. At the end of the drying and seasoning period, the doors of the drying chamber are opened and the linoleum or other material is allowed to cool. During this period the metal parts contract to substantially the original length and the wire fabric follows this contraction and maintains its original taut condition.

The wire fabric sections are drawn into the frame over the pillow members 10 and stretched

by suitable means to an extent that will dispose them in a substantially horizontal position; the catenary curve between successive supports being very slight and substantially negligible. When the desired position has been attained, the cross bars 7 are inserted in one of the helically formed wires making up the wire fabric adjacent to the hooked ends of the bolts 8; these hooks are then engaged with said bar and the nuts 8^a draw up the bolts and hold the wire fabric sections in proper position. Any cross wires beyond the bars 7 are then removed.

The wire fabric made up of helically formed cross wires is particularly desirable for use as the supporting means for linoleum and other strip material in sheets or continuous lengths. It is subject to little stretch; it presents in the aggregate a substantially flat surface and the spacing of the individual coils and the rounded character of the latter provide a minimum surface for actual contact with the linoleum and/or other material, and the factor of friction is negligible.

It will be understood, however, that while it is preferred to employ wire fabric of the type made up of helically formed cross wires, other forms of wire fabric may be employed when capable of performing the desired function, without departing from my invention.

I claim:

1. In a rack for the drying and seasoning of linoleum and other material, the combination of an elongated frame comprising a plurality of longitudinal members, uprights, and cross members between said uprights; such construction providing a series of openings or spaces vertically disposed between said uprights, a shelf of foraminous material disposed longitudinally of said frame in said vertically disposed spaces and serving as a support for continuous lengths of such material, a continuous length of wire fabric serving as the shelf, take-up means disposed at the ends of the frame for holding said wire fabric in a taut condition, and supports for said take-up means disposed beyond the ends of the frame.

2. In a rack for the drying and seasoning of linoleum and other material, the combination of an elongated frame comprising a plurality of longitudinal members, uprights, and cross members between said uprights; such construction providing a series of openings or spaces vertically disposed between said uprights, a shelf of foraminous material disposed longitudinally of said frame in said vertically disposed spaces and serving as a support for continuous lengths of such material, a continuous length of wire fabric serving as the shelf; said wire fabric being made up of a series of helically formed interconnected cross wires, continuous cross-bars connected to the end wires of said fabric, take-up means at the ends of the frame in engagement with said bars and serving to hold said wire fabric in a taut condition, and supports for said take-up means disposed beyond the ends of the frame.

3. In a rack for the drying and seasoning of linoleum and other material, the combination of an elongated frame comprising a plurality of longitudinal members, uprights, and cross members between said uprights; such construction providing a series of openings or spaces vertically disposed between said uprights, a shelf of foraminous material disposed longitudinally of said frame in said vertically disposed spaces and

serving as a support for continuous lengths of such material, a continuous length of wire fabric serving as the shelf; said wire fabric being made up of a series of helically formed interconnected cross wires, continuous cross-bars connected to the end wires, a series of transverse members disposed beyond the ends of said frame, and adjustable bolts carried by said transverse members and having hooked ends engaging said continuous cross-bars for holding said wire fabric in a taut condition.

4. In a rack for the drying and seasoning of linoleum and other material, the combination of an elongated frame comprising a plurality of longitudinal members, uprights, and cross members between said uprights, such construction providing a series of openings or spaces vertically disposed between said uprights, a shelf of foraminous material disposed longitudinally of said frame in said vertically disposed spaces and serving as a support for continuous lengths of such material, a continuous length of wire fabric forming the shelf, and a plurality of supplemental supports carried by the cross members and disposed at intervals throughout the length of the frame upon which said shelf may rest.

5. In a rack for the drying and seasoning of linoleum and other material, the combination of an elongated frame comprising a plurality of longitudinal members, uprights, and cross members between said uprights; such construction providing a series of openings or spaces vertically disposed between said uprights, a shelf of foraminous material disposed longitudinally of said frame in said vertically disposed spaces and serving as a support for continuous lengths of such material, a continuous length of wire fabric forming the shelf, and a plurality of rounded supports carried by the cross members and disposed at intervals throughout the length of the frame upon which said shelf may rest.

6. In a rack for the drying and seasoning of linoleum and other material, the combination of an elongated frame comprising a plurality of longitudinal members, uprights, and cross members between said uprights; such construction providing a series of openings or spaces vertically disposed between said uprights, a shelf of foraminous material disposed longitudinally of said frame in said vertically disposed spaces

and serving as a support for continuous lengths of such material, a continuous length of wire fabric made up of helically formed interconnected continuous cross wires serving as the shelf, cross bars connected to each of the end wires of said wire fabric, a series of hooked bolts engaging each of said cross bars, supports for said bolts disposed beyond the ends of the frame, and nuts in engagement with said supports for taking up said bolts and imparting tension to said wire fabric.

7. A rack for drying and seasoning linoleum in continuous strips, comprising an elongated structural metal frame made up of a series of vertical posts, a series of longitudinal sections disposed between and connected to said posts for bracing and staying said frame in a longitudinal direction, a series of sets of cross members between said posts, pillow members supported by said cross members; such construction providing a series of openings or spaces vertically disposed between said vertical posts, a series of horizontally disposed foraminous elements in continuous lengths supported by said pillow members; said foraminous elements presenting a series of clear, unbroken and unobstructed surfaces from end to end of the frame, and means at the ends of the frame for holding said foraminous elements in a taut condition.

8. A rack for drying and seasoning linoleum in continuous strips, comprising an elongated structural metal frame made up of a series of vertical posts, a series of longitudinal sections disposed between and connected to said posts for bracing and staying said frame in a longitudinal direction, a series of sets of transverse members supported by said vertical posts throughout the length of the frame; such construction providing a series of openings or spaces vertically disposed between said vertical posts, pillow members having rounded upper surfaces mounted on said transverse members, a series of horizontally disposed foraminous elements in continuous lengths supported by said pillow members; said foraminous elements presenting a series of clear, unbroken and unobstructed surfaces from end to end of the frame, and means disposed at the ends of the frame for holding said foraminous elements in a taut condition.

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65	140
70	145
75	150