J. MARK & E. N. MOHL.

GRATING.

APPLICATION FILED JULY 6, 1914.

1,140,692.

Patented May 25, 1915.

2 SHEETS—SHEET 1.

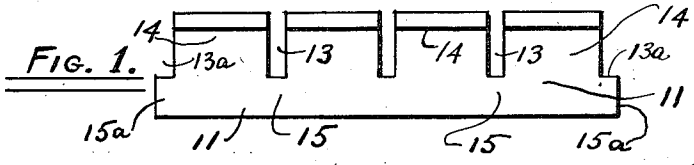


FIG. 1.

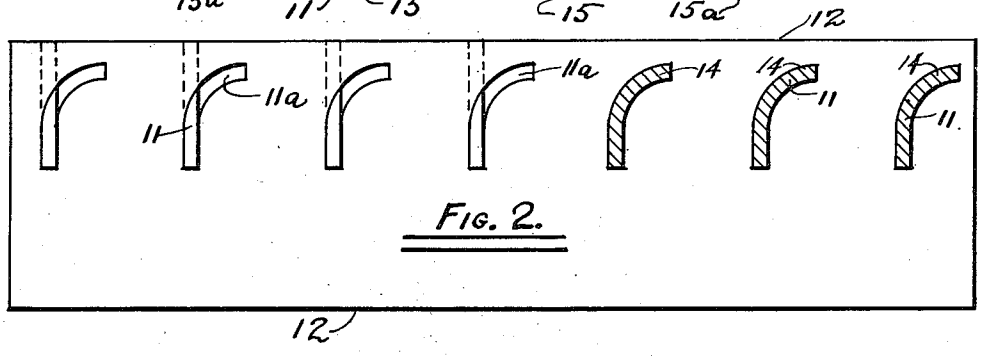


FIG. 2.

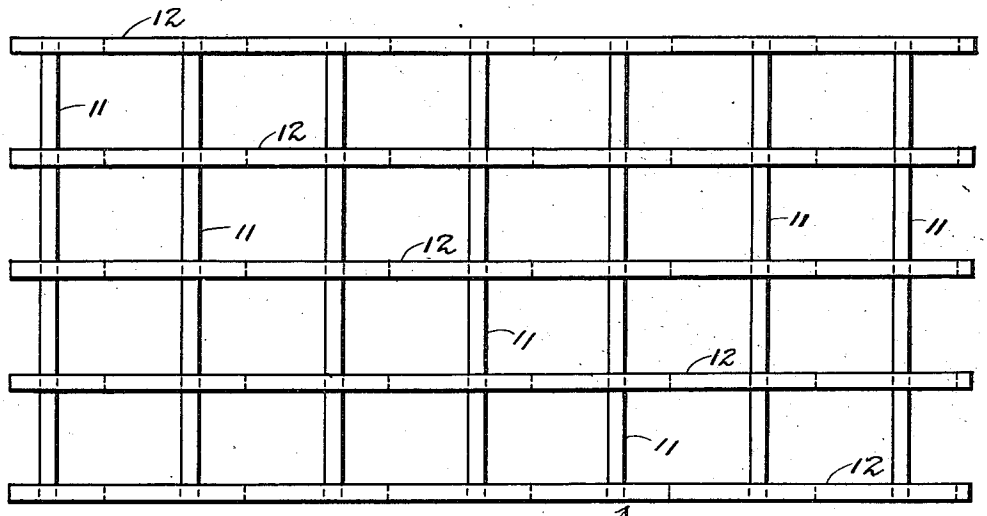


FIG. 3.

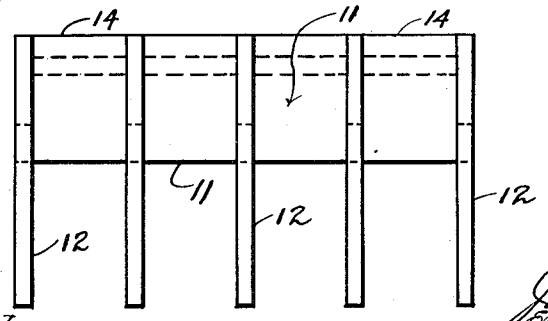


FIG. 4.

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GRATING.

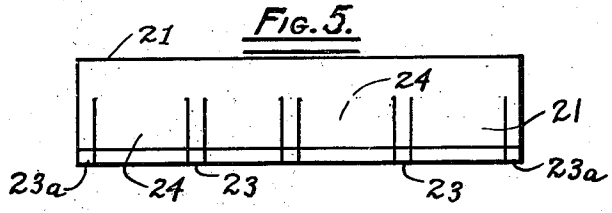
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2 SHEETS—SHEET 2.

FIG. 5.



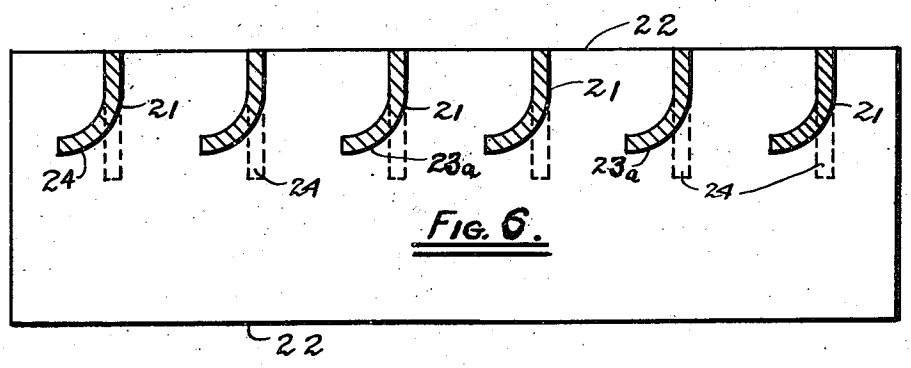
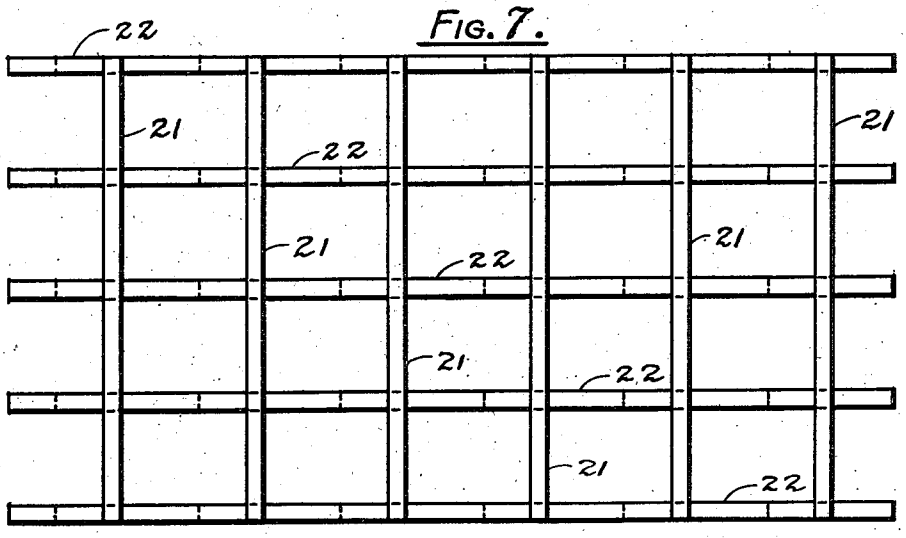


FIG. 6.

FIG. 7.



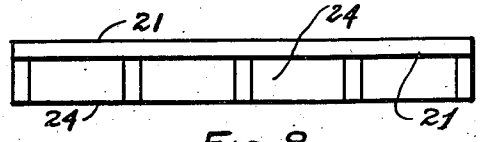


FIG. 8.

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UNITED STATES PATENT OFFICE.

JACOB MARK, OF BROOKLYN, AND EMANUEL N. MOHL, OF NEW YORK, N. Y., ASSIGNORS TO THE FIRM OF MARK & MOHL, INC., OF BROOKLYN, NEW YORK.

GRATING.

1,140,692. Specification of Letters Patent. Patented May 25, 1915.

Application filed July 6, 1914. Serial No. 849,324.

To all whom it may concern:

Be it known that we, JACOB MARK, residing at 8629 Twenty-fourth avenue, Brooklyn, in the county of Kings and State of New York, and EMANUEL N. MOHL, residing at 205 Henry street, New York, in the county and State of New York, have invented a new and useful Grating, of which the following is a specification.

Our invention relates to improvements in gratings used for areaways, sidewalk openings, subway coverings, fire-escape treads and platforms, stair treads and platforms, guards for windows or openings in walls, openings in interiors of structures and for similar purposes; it consists in the novel features hereinafter more fully described.

The objects of our improvement are: First to produce a grating of great strength and durability with a minimum expense of material and labor; second, to produce a grating of attractive appearance; third, to produce a grating, which is comparatively free from dirt and obstructions accumulating in its passages and between its bars. We attain these objects by the grating, one form of which is illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of detail 11; Fig. 2 is an elevation of our grating, shown at the left as finished and at the right with the spacing bars 11 just inserted, as is hereinafter more fully described. Fig. 3 is a plan of our grating all finished, and Fig. 4 is an end view of the grating partly finished as in Fig. 2. Fig. 5 is an elevation of the detail 21, which is a modified form of the detail 11. Fig. 6 is an elevation of a modified form of our grating, and Fig. 7 is a plan of the same. Fig. 8 is a plan of the detail 21 shown in Fig. 5 in elevation.

Similar numerals and letters refer to similar parts throughout the several views.

Our grating, as shown in Figs. 1, 2, 3 and 4, consists essentially of two sets of bars: 1. Longitudinal bars 12, having curved slots punched in them. 2. Transverse bars 11, having notches 13 and 13ª punched or cut on their curved edges; the said transverse bars 11 have the same form in cross-section as the slots in the longitudinal bars 12; the notches 13 and 13ª are about equal in width to the thickness of the longitudinal bars 12. The strips 14 of the bars 11, which are contained between the notches 13 and 13ª, are equal in length to the distance between the longitudinal bars 12. 15 and 15ª are the necks which are left in the bars 11 under the strips 13 and 13ª. Our grating is formed by passing the transverse bars 11 through the slots in the longitudinal bars 12, as shown at the right of Fig. 2 in section, until the notches 13 and 13ª of the bars 11 will coincide with the thickness of the bars 12; the strips 14 are then unbent until they become vertical and straight, their vertical edges thereby becoming horizontal and flush with the surface of the grating, as shown at the left of Fig. 2 in dotting. The necks 15 and 15ª will remain in the slots of the bars 12, and they will prevent the bars 11 from being either raised or lowered.

Figs. 5, 6, 7 and 8 show a modification of our grating, in which the transverse bars 21 have their lower edges curved, instead of the upper ones as in Figs. 1, 2, 3 and 4. Instead of notches, the bars 21 have tongues 23 and 23ª which are formed by slitting the curved edges of the bars 21. 24 are the strips contained between the tongues 23 and 23ª. The longitudinal bars 22 have their slots extending to the surface of the grating; the outline of these slots is identical with the end view of the transverse bars 21.

To assemble our grating, the transverse bars 21 are inserted into the slots of the longitudinal bars 22, the tongues 23 and 23ª coinciding in thickness with the depth of said slots and filling them up; the curved strips 24 of the bars 21 are then unbent downwardly to a vertical position, as shown in dotting in Fig. 6.

A driving fit may be given the slots and notches of our grating in either modification of it to secure rigidity of the same.

In the form of our grating shown in Figs. 1, 2, 3 and 4, tongues may also be used instead of the notches 13 and 13ª; but the tongues 23 and 23ª cannot be omitted from the modification shown in Figs. 5, 6, 7 and 8.

Many other modifications could be made in the form and details of our grating without departing from the main scope of our invention. We do not, therefore, restrict ourselves to the form of our grating as disclosed by the drawings; but we intend to include also all reasonably obvious modifications and all mechanical equivalents of the same.

What we claim as our invention and desire to secure by Letters Patent is:—

1. A grating comprising longitudinal bars and transverse bars, said longitudinal bars having slots adapted to fit the initial shape of said transverse bars, the upper ends of said slots extending in a direction, which is at an angle to the lower ends of said slots, said transverse bars passing through said slots, and said transverse bars having slits on their edges flush with the surface of said longitudinal bars, the strips of said transverse bars inclosed between said slits being bent out of the line of said slots.

2. A grating comprising longitudinal bars and transverse bars, said longitudinal bars having curved slots adapted to fit the initial shape of said transverse bars, said transverse bars passing through said slots, and said transverse bars having slits on their edges flush with the surface of said longitudinal bars, the strips of said transverse bars inclosed between said slits being bent out of the line of said slots.

3. A grating comprising longitudinal bars and transverse bars, said longitudinal bars having slots adapted to fit the initial shape of said transverse bars, the lower ends of said slots being in a vertical plane when said grating is horizontal, and the upper ends of said slots being at an angle to said lower ends, said transverse bars passing through said slots, and said transverse bars having slits on their edges flush with the surface of said longitudinal bars, the strips of said transverse bars inclosed between said slits being bent out of the line of said slots into a vertical plane when said grating is horizontal.

4. A grating comprising longitudinal bars and transverse bars, said longitudinal bars having curved slots, and said transverse bars passing through said slots and having tongues anchored therein, and the portions of said transverse bars inclosed between said longitudinal bars being vertical, when said grating is horizontal.

5. A grating comprising longitudinal bars and transverse bars, said longitudinal bars having curved slots, and said transverse bars passing through said slots and having on their upper edges tongues anchored in said slots, the portions of said transverse bars inclosed between said longitudinal bars being vertical when said grating is horizontal.

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