May 8, 1928. 1,669,236

L. FICK

GRATING

Filed Feb. 8, 1927

Fig. 1.

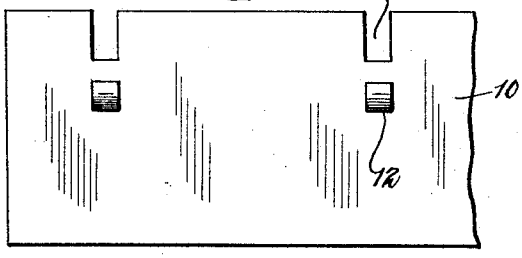


Fig. 2.

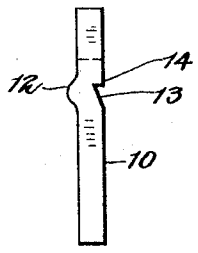


Fig. 3.

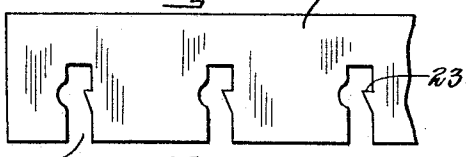


Fig. 4.

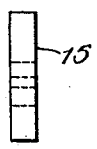


Fig. 5.

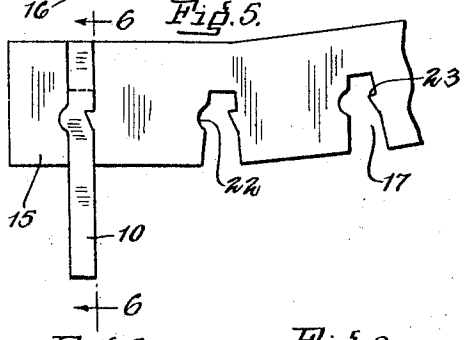


Fig. 6.

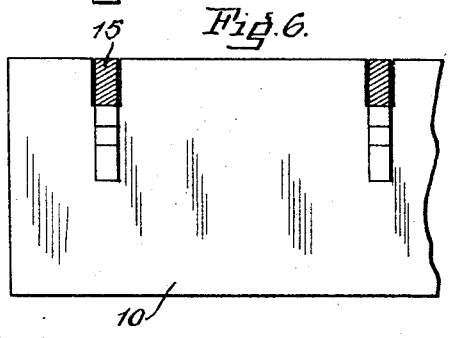


Fig. 8.

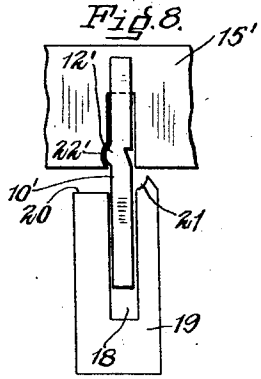


Fig. 9.

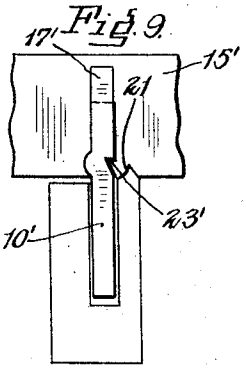
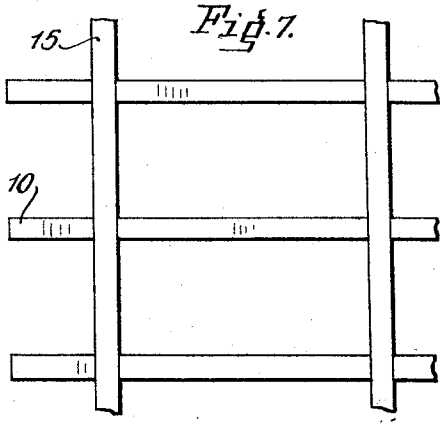


Fig. 7.



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By his Attorney
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Patented May 8, 1928. 1,669,236

UNITED STATES PATENT OFFICE.

LUDWIG FICK, OF BROOKLYN, NEW YORK.

GRATING.

Application filed February 8, 1927. Serial No. 166,685.

This invention relates to improvements in gratings adapted for use in floors for areaways, sidewalk openings, subway constructions or the like, and the method of making the same.

It is the principal object of my invention to provide a readily made grating of simple and therefor inexpensive construction, yet durable and extremely serviceable.

Another object of my invention is the provision of a novel and improved method for making such gratings by the use of simple tools.

A further object of my invention is the provision of a grating of great strength by interlocking the bearing and transverse bars thereof firmly by a simple method.

These and other objects and advantages of my invention will become more fully known as the description thereof proceeds, and will then be specifically defined in the appended claim.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is the front elevation of a bearing bar or plate used in the construction of the grating according to my invention.

Fig. 2 is an end view thereof.

Fig. 3 is a front elevation of a transverse bar, straight.

Fig. 4 is an end view thereof.

Fig. 5 shows the transverse bar, bent.

Fig. 6 is a view seen in the direction of the arrows 6—6, Figure 5, partly in section.

Fig. 7 is a top plan view of a grating constructed according to my invention.

Fig. 8 illustrates the first step of my novel method of making gratings according to my invention by the help of a special tool.

Fig. 9 illustrates the second or final step of the method disclosed in Figure 8.

As illustrated, the grating comprises bearing bars 10 each having a plurality of preferably rectangular, parallel notches or recesses 11 cut into the upper edge of the bar, and below the same a plurality of lips 12 formed on its face, and projecting out of the plane of bar 10 and preferably equal in number to the number of notches 11, while on its opposite face the bar or plate 10 has formed therein a corresponding number of depressions 13 each forming an acute angle and a shoulder 14.

The transverse bars 15 comprise each a plate having in its lower edge a slot 16 of a configuration conforming to the outer contour of the lip and depressions and shoulders of bar 10.

For the reception of bar 10 the transverse bars 15 are subjected to bending, as indicated in Figure 5, by means of any suitable tool or apparatus, so that the slots or notches 16 are somewhat distended or expanded, as indicated at 17, for allowing the ready introduction of bar 10 in a manner easily understood, whereafter the parts are firmly pressed together in their adjusted relative positions by hydraulic or other means in order to form a compact whole.

In Figures 8 and 9 I have illustrated a method of making a grating according to my invention by firmly connecting the bearing bar 10′ with each of the transverse bars 15′, according to which bearing bar 10′ is entered first loosely and preliminarily into the recess 18 of a suitable tool or die 19. One of the branches of said tool forming the central recess thereof, has an upper straight edge, as indicated at 20, while the other branch on the opposite side of the recess 18 has an upper, pointed or beveled edge, as indicated at 21. According to my novel and improved method of making gratings, the bar 10′ is first loosely entered into the slot 17′ corresponding thereto in transverse bar 15′, and with the lower end of bar 10′ in the recess 18, the tool 19 is then driven home by means of any suitable well known tool, so that the bevel edge 21 will slidingly engage the bar 10′ and successively press the lip 12′ of bar 10′ into the corresponding recess in bar 15′, and the angular notch and shoulder will firmly engage the corresponding recess 22′ and shoulder 23′ of part or bar 15′ to firmly interlock both bars.

It will be apparent that by using a corresponding number of bearing bars and transverse bars any size of grating may be constructed for any desired purpose, and that these bars will be firmly interlocked in their relative adjusted positions against torsion and separation.

It is to be understood that while I have shown as an example the preferred form of my construction and my method of practically constructing the same, such changes as come within the scope of the appended claim may be made in the general arrangement and the relative positions of the parts of the gratings and in the construction of

the minor details thereof without departure from the spirit of my invention and the principles involved.

It will be evident, that this grating, which I call "tooth-lock joint" and the method of making same, can also be made and executed in the reversed order from that described above, i. e. the locking means instead of being arranged on the bearing plates, may also just as well be arranged on the transverse bars, and in this case the bearing bars must naturally be provided with the recesses.

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

A grating comprising a supporting bar provided with a recess leading in from the edge thereof and provided at one side and at a point in spaced alinement with the recess with an outstanding lip and at the opposite side at a point in spaced alinement with the recess with a depression one edge of which defines a shoulder, a transverse bar having a recess leading in from the edge thereof, said recesses inter-engaging each other, the recess of the transverse bar being provided at one edge with a notch receiving said lip and at an opposite edge with a shoulder engaging the shoulder at the edge of the depression in the supporting bar.

Signed at New York in the county of New York and State of New York this 7th day of February, A. D. 1927.

LUDWIG FICK.