P. H. E. SCHERBNER.

GRATING.

APPLICATION FILED MAY 27, 1919.

1,346,426. **Patented July 13, 1920.**

Fig. 1,

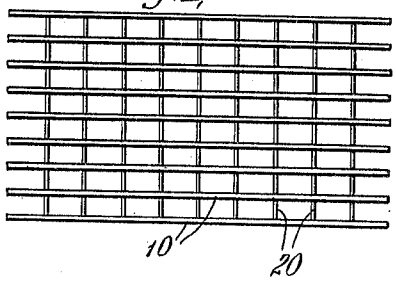


Fig. 2,

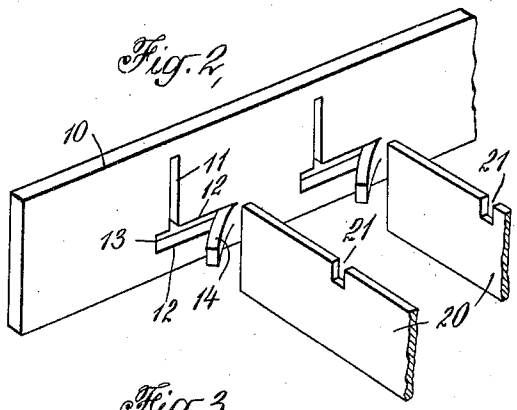


Fig. 5,

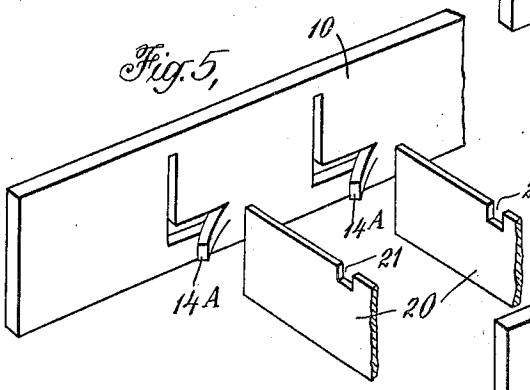


Fig. 3,

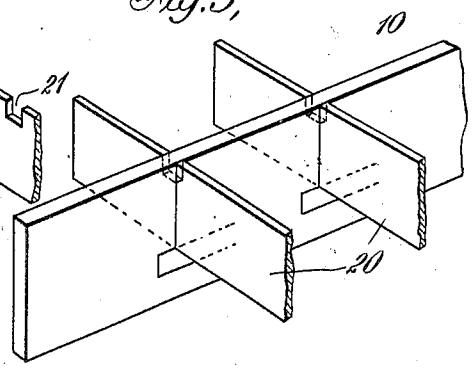


Fig. 6,

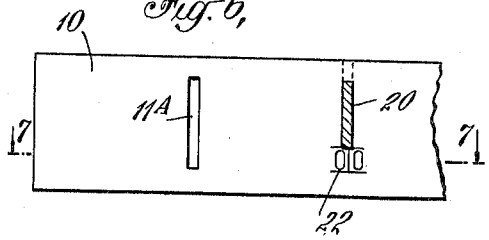


Fig. 4,

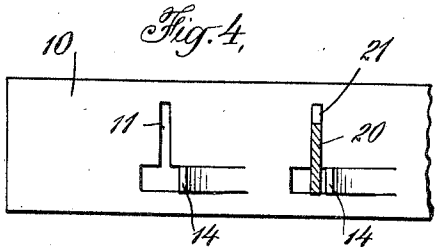
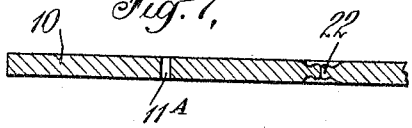


Fig. 7,



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GRATING.

1,346,426. Specification of Letters Patent. Patented July 13, 1920.

Application filed May 27, 1919. Serial No. 300,084.

To all whom it may concern:

Be it known that I, PAUL H. E. SCHERBNER, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Gratings, of which the following, together with the accompanying drawings, is the specification.

My invention relates to gratings and its object is to provide a grating of simple and inexpensive construction, and one which has great strength. More specifically, the object is to improve the manner of making gratings and to provide a simple way of reducing the cost of manufacturing structures of this kind.

In order that my invention may be thoroughly understood, I will now proceed to describe same in the following specification, and will then point out the novel features thereof in appended claims.

Figure 1 is a plan view of a portion of a grating which is made according to and embodies my invention.

Fig. 2 is a perspective view of some of the parts of this grating, showing the positions which they assume before being assembled.

Fig. 3 is a similar perspective view of the same parts shown in their assembled and complete condition.

Fig. 4 is an elevation showing the slotted member with one of the transverse members shown in section in the position it assumes in being inserted in one of the slots.

Fig. 5 is a perspective view corresponding with Fig. 2, but showing a modified form of construction.

Fig. 6 is an elevation of one of the slotted members with a transverse member secured in one of the slots by another modification of construction, a transverse member in this being shown in section.

Fig. 7 is a sectional plan view of the arrangement shown in Fig. 6, the section of this figure being taken on the line 7—7 of Fig. 6.

Like characters of reference designate corresponding parts in all of the figures of the drawings.

The grating comprises a plurality of flat metallic strips spaced apart, some running in one direction and others at right angles to the first. For the sake of differentiation, I will call those parts which are designated by the reference character 10, longitudinal members, and those designated at 20, the transverse members. The metal of the longitudinal members is cut away at spaced intervals to form vertical slots 11 terminating short of the edges. At the base of each of these slots a pair of parallel slits 12 are cut through the metal at right angles to the slot 12, and 13 is a vertical cut joining the ends of these slits. The metal between these slits is bent outwardly as at 14, a sufficient amount to permit the insertion of the transverse members, the width of which is approximately the same as the distance from the top of slot 11 to the lower slit 12.

Notches 21 are cut at spaced intervals in the upper edges of the members 20. These notches are of a width approximately the same as the thickness of the members 10 and of a depth approximately the same as the distance from the top of slots 11 to the upper edge of the members 10. The transverse members 20 are passed through the slots in the longitudinal members 10, as shown in the right-hand portion of Fig. 4.

Then they are raised up until their upper edges coincide with the upper edges of 10, after which the parts 14 of the member 10 are bent back into their original position under the transverse members 20, as shown in Fig. 3.

The parts 14 are bent outwardly along the grain of the metal and bent back again without straining the fibers of the material. They are easily cut and punched outwardly in the same operation as that which cuts the slots 11, and after the transverse members are positioned, may be easily bent back into the locking position by means of a roller drawn over the surface of the member 10. Thus a very strong and rigid construction is easily and inexpensively made.

The modification illustrated in Fig. 5 is similar to that described, but in this case the outwardly bent portions 14^A terminate at one edge of the slots 11, when they are bent back into locking position instead of extending beyond the lower ends of the slots, as in the construction shown in Figs. 2, 3 and 4.

Another way of locking the transverse members in position is illustrated in Figs. 6 and 7. In this case, the slots 11^A are themselves as long as the width of the transverse members 20. After the transverse members are inserted through the slots and raised up into their final position, the metal of the longitudinal member 10 under the transverse members 20 is punched together,

as shown at 22. This effectively locks the parts together and, of course, forms a strong structure in a very simple manner.

Several forms of construction are illustrated and described for the purpose of showing that I do not limit myself to any specific form or construction, and I intend no limitations other than those imposed by the appended claims.

What I claim is:

1. Grating comprising a plurality of longitudinal members cut away at spaced intervals to form straight slots terminating short of their edges, a plurality of narrower flat transverse members passing through said slots, and each provided with spaced notches in its upper edge, and parts of the longitudinal members bent longitudinally under the under edges of the transverse members to maintain said transverse members in positions with the parts thereof adjacent the notches overlapping the longitudinal members at the upper ends of the slots therein.

2. Grating comprising a plurality of longitudinal members cut away at spaced intervals to form straight slots terminating short of their edges, a plurality of narrower flat transverse members passing through said slots, and each provided with spaced notches in its upper edge, parts of the longitudinal members at the lower ends of the slots being so constructed that they may be bent outwardly at an angle to the slots to permit the insertion of the transverse members through the slots, and then bent back under the transverse members to maintain said transverse members in positions with the parts thereof adjacent the notches overlapping the longitudinal members at the upper ends of the slots therein.

3. Grating comprising a plurality of longitudinal members cut away at spaced intervals to form straight slots terminating short of their edges, a plurality of narrower flat transverse members passing through said slots, and each provided with spaced notches in its upper edge, and a pair of parallel slits in the longitudinal member from the lower ends of the slots and at right angles thereto, the metal being cut through between said slits at one end of each pair of said slits, so that the metal between the slots may be bent outwardly to permit the insertion of the transverse members through the slots and then bent back under the transverse members to maintain said transverse members in positions with the parts thereof adjacent the notches overlapping the longitudinal members at the upper ends of the slots therein.

4. Grating comprising a plurality of longitudinal members cut away at spaced intervals to form straight slots terminating short of their edges, a plurality of narrower flat transverse members passing through said slots, and each provided with spaced notches in its upper edge, and a pair of parallel slits in the longitudinal member across the lower ends of the slots and at right angles thereto, the metal being cut through between said slits at one end of each pair of said slits, so that the metal between the slots may be bent outwardly to permit the insertion of the transverse members through the slots and then bent back under the transverse members to maintain said transverse members in positions with the parts thereof adjacent the notches overlapping the longitudinal members of the upper ends of the slots therein, said metal between the slits extending across the slots under the transverse members.

In witness whereof, I have hereunto set my hand this 23d day of May 1919.

PAUL H. E. SCHERBNER.