

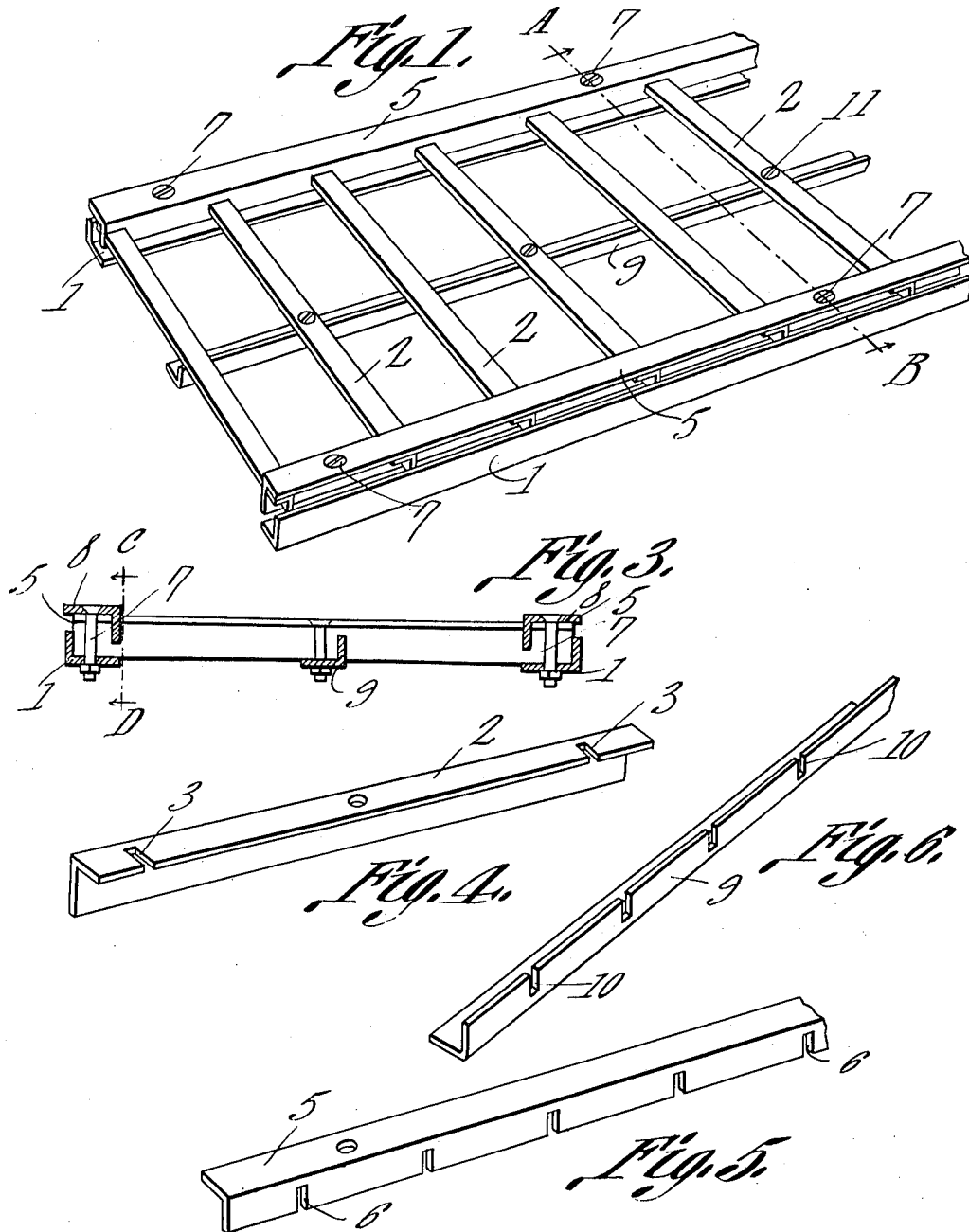
J. WATSON.  
GRATING.

APPLICATION FILED NOV. 14, 1911.

Patented Aug. 20, 1912.

2 SHEETS—SHEET 1.

1,035,927.



Witnesses

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Inventor

by

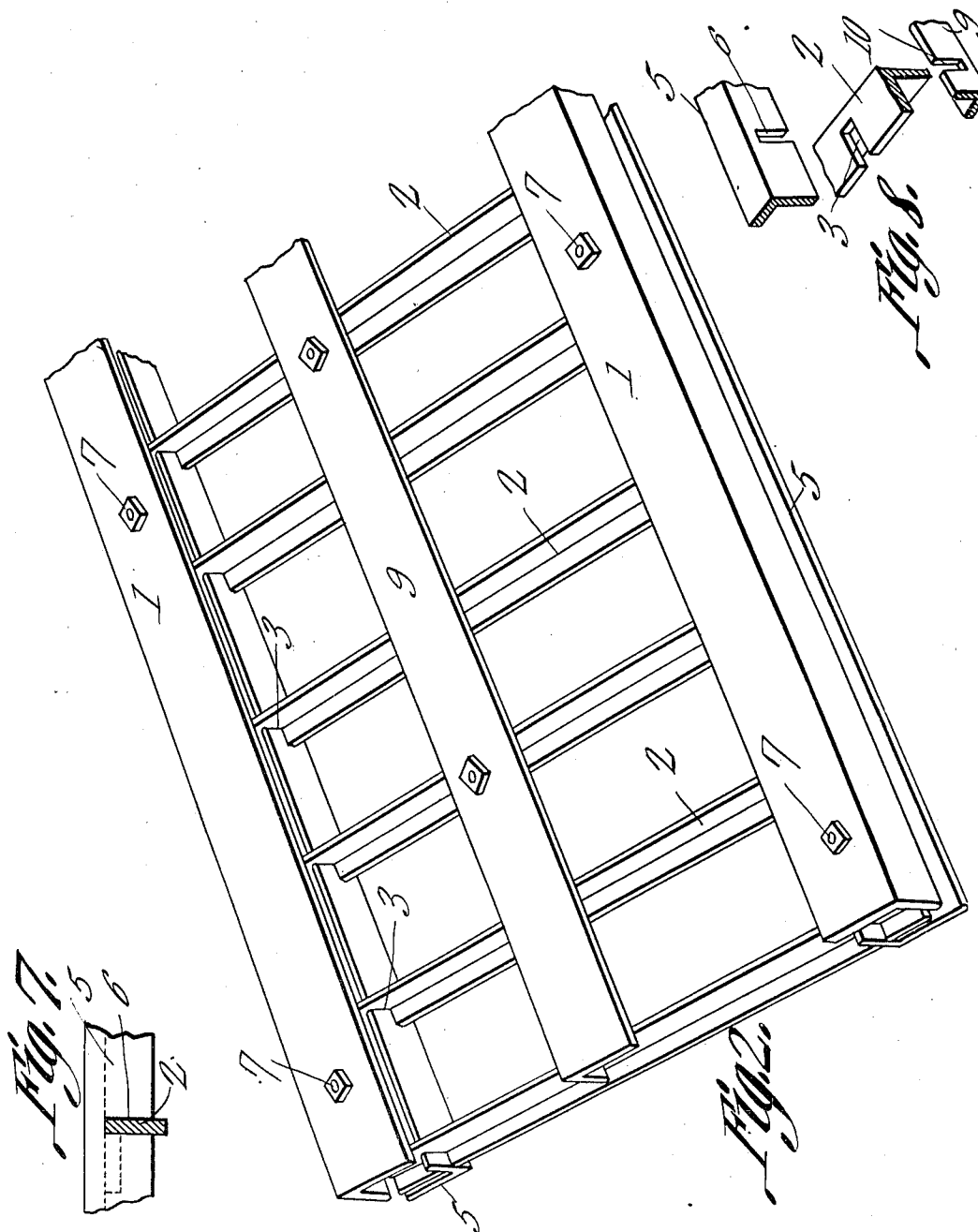
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# UNITED STATES PATENT OFFICE.

JAMES WATSON, OF MARINETTE, WISCONSIN.

## GRATING.

1,035,927.

Specification of Letters Patent.

Patented Aug. 20, 1912.

Application filed November 14, 1911. Serial No: 660,225.

*To all whom it may concern:*

Be it known that I, JAMES WATSON, a citizen of the United States, residing at Marinette, in the county of Marinette and State of Wisconsin, have invented a new and useful Grating, of which the following is a specification.

This invention relates to metallic gratings, especially designed for use in side-walks and the like although it is to be understood that the same is equally well adapted for use in various other ways as, for example, in the construction of fire escapes, buildings, grilles, etc.

One of the objects of the invention is to provide a grating the parts of which interlock so as to produce a compact but durable structure, the interlocking parts cooperating to form a truss whereby the grating is rendered very strong and durable.

A further object is to provide a grating which is cheap to manufacture out of standard forms and sizes of metal stock.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a perspective view of the grating. Fig. 2 is an enlarged perspective view of the grating inverted. Fig. 3 is a section on line A—B Fig. 1. Fig. 4 is a perspective view of one of the cross strips. Fig. 5 is a perspective view of one of the side strips. Fig. 6 is a similar view of the reinforcing member. Fig. 7 is a section on line C—D Fig. 3. Fig. 8 is a perspective view of portions of the grating separated.

Referring to the figures by characters of reference 1 designates angle strips constituting the bottom side members of the grating and the base flanges of these strips support the end portions of cross members 2 formed of angle strips and fitting snugly against the upstanding portions of the strips 1. The strips 2 are arranged with

their flanges uppermost and each of these flanges is provided, adjacent its ends, with transverse slots 3 extending up to the upstanding portion of the strip, as clearly indicated in Fig. 4.

The upper side members 5 of the grating are formed of angle strips which bear downwardly on the cross members 2 and the flange of each of these side members 5 has slots 6 extending upwardly thereinto for the reception of the slotted portions of the cross members 2. Thus it will be seen that when the members 2 and 5 are assembled, the slotted portions of the members 2 will straddle the flanges of the members 5 while the slotted flanges of said members 5 will straddle the upstanding portions of the cross members 2. This will be apparent by referring particularly to Fig. 8. After the parts have thus been assembled, bolts 7 may be extended through the upper and lower portions of the strips 1 and 5 and, when tightened, will bind said strips tightly on the cross members 2, thus holding the parts locked together securely. The heads of the bolts are preferably arranged in counter sinks 8, as shown in Fig. 3.

Where the gratings are made of considerable width, a reinforcing member 9, formed of an angle strip, may be extended transversely under the middle portions of the cross members 2, the flange of this reinforcing member having slots 10 extending downwardly thereinto from its upper end so as to receive the vertical portions of the members 2. This reinforcing member 9 is adapted to be secured in place by means of bolts 11 extending through the lower portion thereof and through certain of the cross members 2, as shown in Fig. 1.

It will be apparent by forming a grating in the manner herein described, the amount of metal necessary can be materially reduced without, however, weakening the grating. Moreover, as the parts interlock, as described, they cannot easily become detached and produce a compact structure presenting an efficient tread surface.

While the grating has been designed primarily for use in side walks, it is to be understood that it can be used wherever desired, as in the construction of fire escapes, grilles, etc.

What is claimed is:—

1. A grating including lower side members formed of angle strips, cross members

bearing downwardly upon said lower side members and formed of angle strips, and upper side members bearing downwardly on the end portions of the cross members 5 and interlocked therewith.

2. A grating including lower side members, cross members bearing downwardly thereon at their ends and formed of angle strips, upper side members formed of angle strips and bearing downwardly on and straddling the end portions of cross members, said cross members being slotted to receive portions of the upper side members. 10

3. A grating including lower side members, formed of angle strips, cross members bearing downwardly thereon at their ends and formed of angle strips, upper side members formed of angle strips and bearing downwardly upon and straddling the end portions of the cross members, said cross members having slots therein for the reception of portions of the upper side members, and means for binding the upper and lower side members upon the end portions 20 of the cross members.

4. A grating including lower side members formed of angle strips, cross members bearing downwardly thereon at their ends and formed of angle strips, upper side members formed of angle strips and bearing downwardly upon and straddling the end portions of the cross members, said cross members having slots therein for the 30

reception of portions of the upper side members, means for binding the upper and lower side members upon the end portions of the cross members, and a reinforcing member extending transversely under the cross members and formed of an angle strip, said reinforcing member having slots for the reception of the downwardly extending portions of the cross members, and means for securing the reinforcing member to the cross members. 35 40

5. A grating including upper and lower side members each formed of an angle strip, the members at each side being oppositely disposed, and cross members having their ends seated between the side members and interlocked with one of them. 45 50

6. A grating including upper and lower side members each formed of an angle strip, the members at each side being oppositely disposed, cross members having their ends seated between the side members and interlocked with one of them, and means for binding the side members upon the ends of the cross members. 55

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses. 60

JAMES WATSON.

Witnesses:

A. T. FAIRCHILD,  
L. J. EVANS.