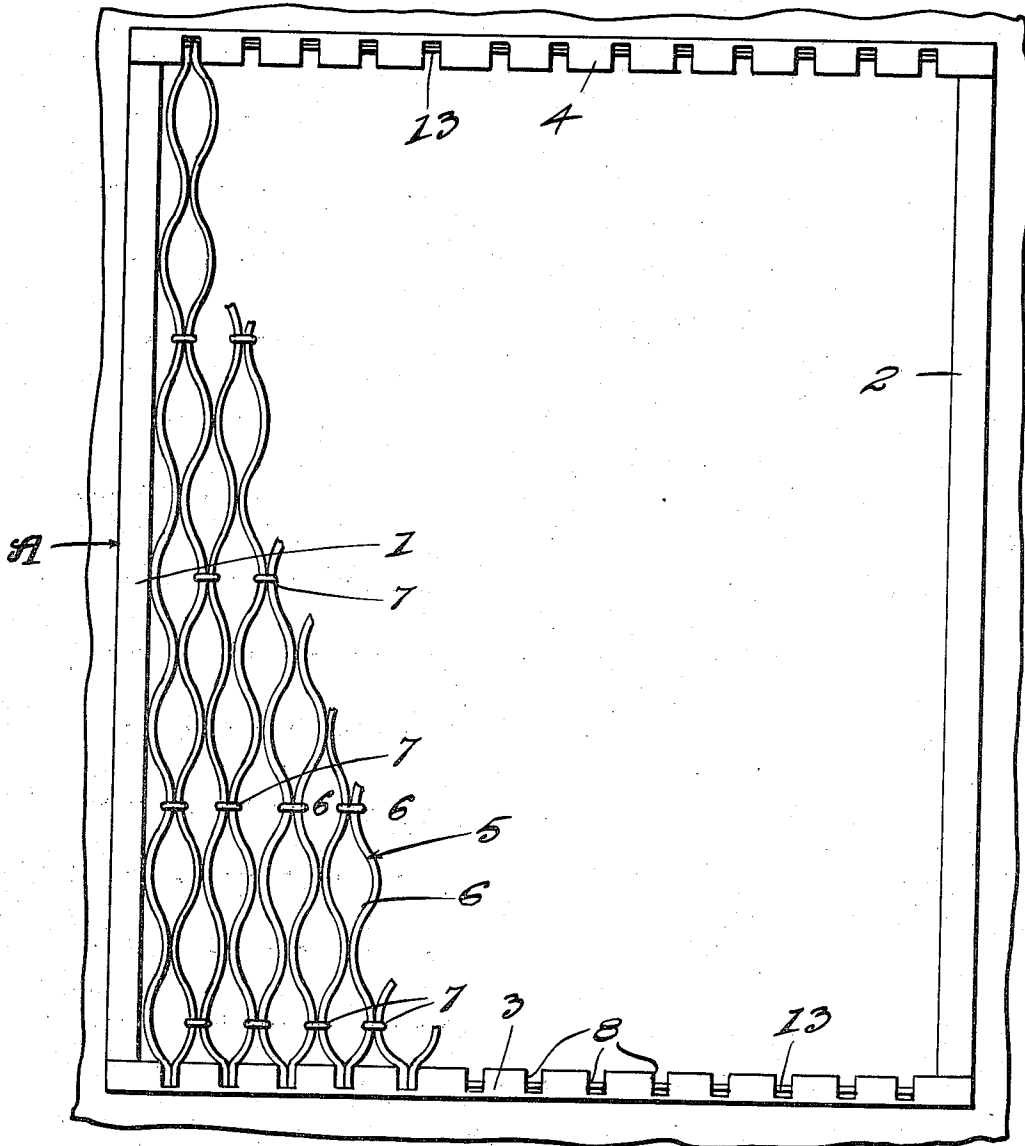


GRATING.

1,160,044.

2 SHEETS—SHEET 1.

F 19-1-



F 19-6-



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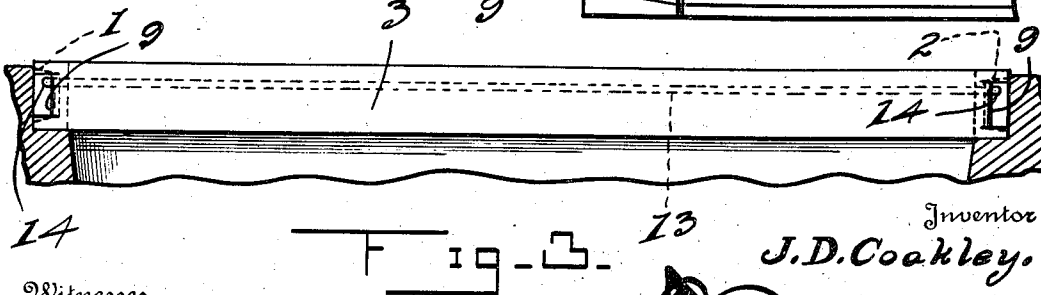
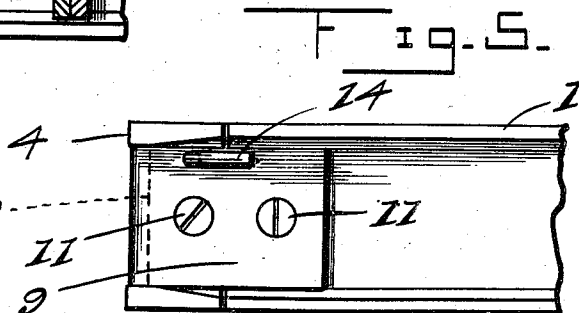
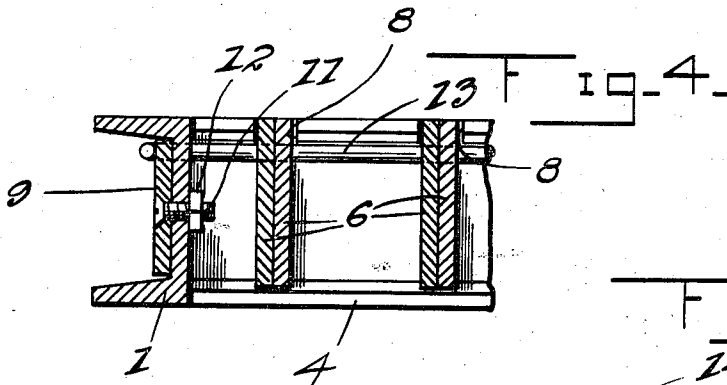
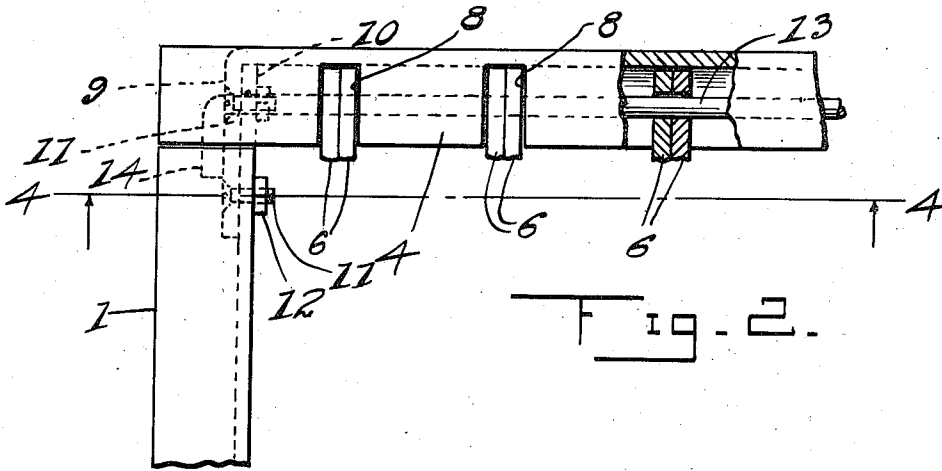
Attorney

J. D. COAKLEY.
GRATING.
APPLICATION FILED JAN. 15, 1915.

1,160,044.

Patented Nov. 9, 1915.

2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH D. COAKLEY, OF NEW YORK, N. Y.

GRATING.

1,160,044.

Specification of Letters Patent.

Patented Nov. 9, 1915.

Application filed January 15, 1915. Serial No. 2,408.

To all whom it may concern:

Be it known that I, JOSEPH D. COAKLEY, a citizen of the United States, residing at Bronx, New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Grating; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in grating for vaults, windows, doors and the like and of the type used in side-walk and other building construction and has for its primary object to provide a durable and highly useful grating of skeleton construction and which may be easily assembled or disassembled by inexperienced persons.

Another object is to provide grating of the character described which will reinforce building structure, and the like, provide for proper lighting and ventilation of basements, cellars, vaults and similar structures and which will not become deranged subject to rough usage.

Another object is to generally improve and simplify grating construction of the character described so as to render it more practical, capable of being applied to various building construction, and inexpensive to manufacture.

The above and additional objects are accomplished by such means as are illustrated in the accompanying drawings, described in the following specification and then more particularly pointed out in the claim.

With reference to the drawings, wherein I have illustrated the preferred embodiment of my invention as it is reduced to practice, and throughout the several views of which similar reference numerals designate corresponding parts, Figure 1 is a fragmentary plan view of grating constructed in accordance with my invention, Fig. 2 is an enlarged detail plan view of a portion of the frame for the grating, said frame being broken away, Fig. 3 is a side elevation of the grating showing it applied to a side-walk, Fig. 4 is a detail fragmentary sectional view taken on line 4-4 of Fig. 2 illustrating the connecting means for the frame and grating securing means, Fig. 5 is a fragmentary enlarged side elevation of the frame showing one corner thereof, and Fig. 6 is a detail sectional view taken on line

6-6 of Fig. 1, showing the manner of connecting the strips comprising the grating.

Referring to the drawings by characters of reference, A designates as an entirety, a rectangular skeleton frame for supporting the grating bars and which consists of channel iron side bars 1 and 2 and similarly constructed end bars 3 and 4, which are connected at their ends with the ends of the side bars.

Secured with the frame A is skeleton grating structure designated 5 as an entirety. The grating structure 5 comprises a number of flat strips 6 of flat or ribbon metal, each of said strips being of serpentine formation. The strips 6 engage one another at spaced points and have their ends secured to the bars 3 and 4 of the frame. The strips are arranged in pairs and the ends of the strips of each pair are disposed in engagement with one another and parallel for a short distance at points where the strips of one pair engage strips of another pair and at suitable other points where the several strips engage are positioned metallic clips 7 which surround the engaging portions of the several strips and hold the strips together.

The end bars 3 and 4 have their open sides innermost and the uppermost flanges thereof are provided with a plurality of equidistantly spaced recesses 8 which receive the ends of the strips of each pair. The lower edges of the strips at the ends engage the lower flanges of the bars 3 and 4 while the upper ends are disposed flush with the upper face of the flanges on the upper side of the bars 3 and 4.

Carried at the ends of the web portions of the bars 3 and 4 of the frame, are inwardly and right angularly directed attaching flanges 9 which engage upon the outer faces of the web portions of the bars 1 and 2 at the ends thereof. Carried at the ends of the web portions of the bars 1 and 2 and extending outwardly therefrom are flanges 10 which engage the inner faces of the flanges 9 and inner faces of the web portions of the bars 3 and 4 as shown clearly in Fig. 2 in the drawings. Screws or other suitable fastening elements 11 are inserted through the flanges 9 and 10 of the web portions of the bars 1 and 2 and nuts 12 are turned upon the inner ends of said screws and engage the inner faces of the webs of the bars 1 and 2 and the flanges 10.

It will be seen that the frame may be

quickly and easily assembled or disassembled and in being secured in the manner hereinbefore described is comparatively rigid, and not apt to sag at the corners or
5. bend in any manner.

Securing rods 13 are inserted through the ends of the strips 6 and disposed between the flanges on the end bars 3 and 4 of the frame. These bars 13 are passed through alined
10 openings in the flanges 9 and 10 at the corners of the frame and at their ends are bent right angularly as at 14 so as to engage the outer faces of the flanges 9. These rods 13 are bent as at 14 after being passed through
15 the ends of the strips 6 so as to prevent accidental derangement thereof. By means of these rods, it will be seen that the strips 6 are prevented being lifted upwardly from the frame and otherwise securely held in
20 place.

With reference to the foregoing description and accompanying drawings, it will be seen that I have provided grating which may be quickly and easily assembled, will
25 prove extremely durable and which is adapted for use in connection with doors, windows, vaults and like structures.

In practice, I have found that the form of my invention, illustrated in the drawings

and referred to in the above description, as 30 the preferred embodiment, is the most efficient and practical; yet realizing that the conditions concurrent with the adoption of my device will necessarily vary, I desire to emphasize the fact that various minor 35 changes in details of construction, proportion and arrangement of parts may be resorted to, when required, without sacrificing any of the advantages of my invention, as claimed. 40

What is claimed is:—

A grating comprising a frame including opposed channel iron supporting bars having spaced inwardly opening recesses in the upper flanges thereof, a plurality of grat- 45 ing strips having their ends disposed within said recesses and resting on the lower of the flanges of said bars and securing rods inserted through the ends of said strips, disposed between the flanges of the bars being 50 carried by said bars.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH D. COAKLEY.

Witnesses:

ALFRED E. SCHAEFER,
JOHN COAKLEY.