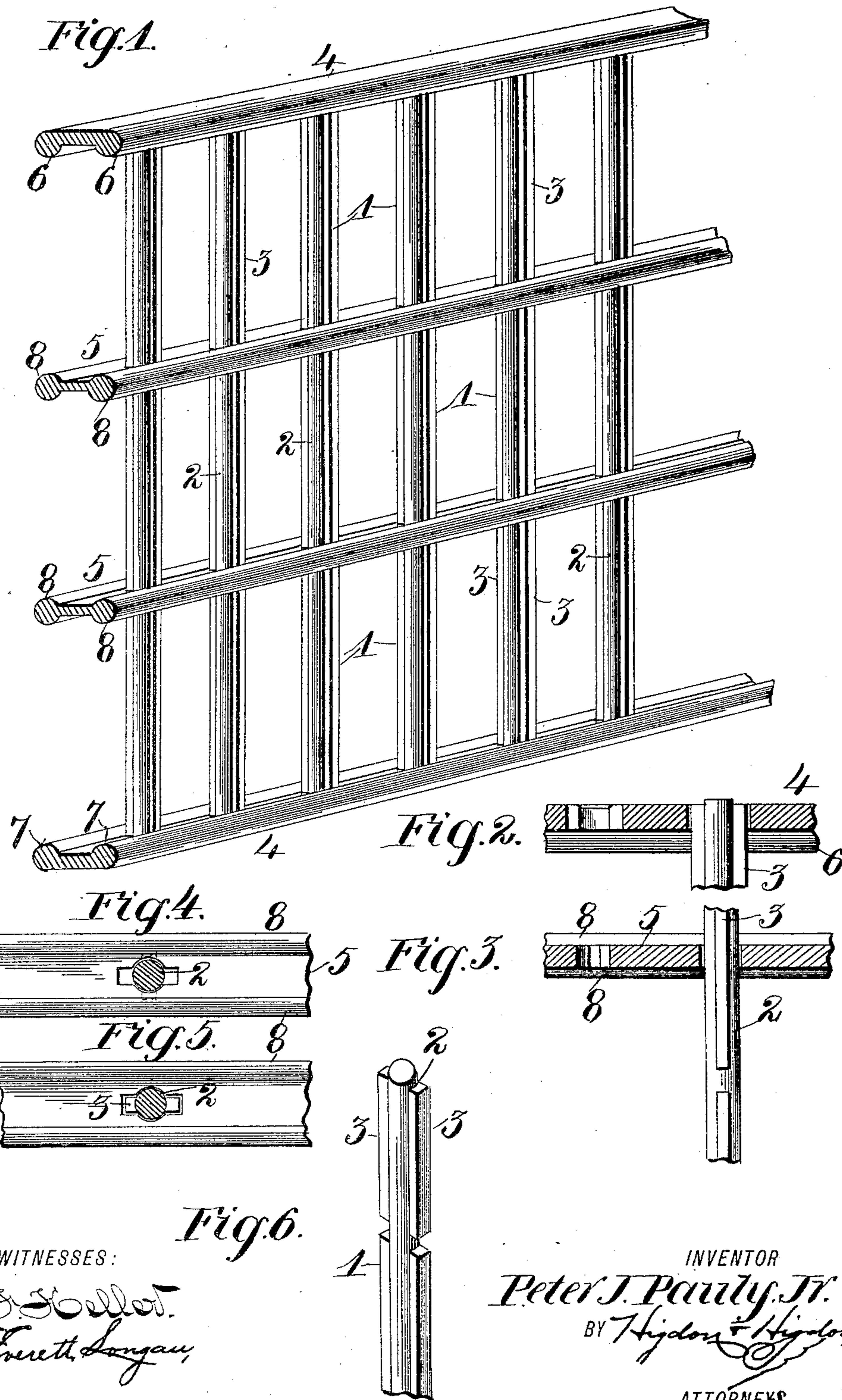


(No Model.)

P. J. PAULY, Jr.  
JAIL OR OTHER GRATING.

No. 450,678

Patented Apr. 21, 1891.





# UNITED STATES PATENT OFFICE.

PETER J. PAULY, JR., OF ST. LOUIS, MISSOURI.

## JAIL OR OTHER GRATING.

SPECIFICATION forming part of Letters Patent No. 450,678, dated April 21, 1891.

Application filed January 16, 1891. Serial No. 378,002. (No model.)

*To all whom it may concern:*

Be it known that I, PETER J. PAULY, Jr., of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Jail or other Gratings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in jail and other gratings; and it consists in the novel arrangement and combination of parts, as will be more fully hereinafter described, and designated in the claims.

In the drawings, Figure 1 is a perspective view of my complete invention. Fig. 2 is an enlarged longitudinal section of the top horizontal cross-pieces or the piece that is conjoined with the ceiling of the cell. Fig. 3 is a horizontal cross-section of one of the middle horizontal cross-pieces. Fig. 4 is a horizontal cross-section of one of the vertical bars in its locked position in the horizontal pieces, and Fig. 5 is a similar view of one of the vertical bars in its unlocked position. Fig. 6 is a perspective view of a vertical bar detached.

Referring to the drawings, 1 indicates a series of vertical bars which I employ in carrying out my invention. Said vertical bars consist of a core 2, which core is provided with angular longitudinal projections 3. Said projections are preferably square, as shown in the drawings, and cut away, leaving only the core wherever they are conjoined with the horizontal cross-pieces 5.

4 indicates the top and bottom horizontal cross-pieces, by means of which and the intermediate horizontal cross-pieces 5 the vertical pieces are secured and fastened together in the manner as hereinafter stated. The top horizontal cross-piece 4 is provided on its lower surface with webs or lips 6, and the bottom horizontal cross-piece 4, or the one that is adjacent to the floor, is likewise provided on its upper surface with similar webs or lips 7. The intermediate horizontal cross-pieces 5 are similarly and likewise provided with webs or lips 8 on their upper and lower surfaces. The object of these webs or lips is to protect the weakened or decreased portions of the vertical pieces from being exposed to the action of any instrument by means of which the prisoner may avail himself to effect escape by

sawing or cutting the vertical bars. For instance, if the prisoner should desire to sever one of the bars where it is connected with one of the intermediate horizontal cross-pieces 5, in order to get to the weakened or decreased portion where said vertical bars go through said horizontal pieces, it would necessitate on the part of the prisoner cutting through or down the webs or lips before he could reach said weakened or decreased portion of the vertical pieces.

The intermediate horizontal cross-pieces 5 are provided with corresponding perforations to the shape of the vertical cross-pieces, through which said pieces may be inserted in their functional operation. The shape of these perforations formed in the intermediate horizontal cross-pieces of course is a circular aperture provided with angular projections corresponding to the shape and structure of the vertical bars.

The apertures formed for the insertion of the vertical bars in the upper plate 4 are similar to the perforations formed in the intermediate horizontal cross-pieces 5, but extend transversely across said bars, so that when said bar or bars are placed on the upper ends of the vertical bars after they (the vertical bars) have been inserted and turned in the intermediate horizontal bars said top bars rigidly lock said vertical bars, so that they cannot be turned in either direction. The core 2 of the vertical bars protrudes and extends beyond the top surface of the upper cross-bars, so that it can be riveted and more effectively secured in said perforation.

The perforations formed in the horizontal bottom piece 4 for the insertion of the vertical bars are similar to those hereinbefore stated as formed in the upper horizontal cross-pieces 4, and core 2 of said bars also extends through and projects below the lower surface of bottom piece 4, so that it can be riveted therein.

Having fully described my invention, I will now proceed to describe its application and use and also the manner in which the grating is constructed and put together. The top and bottom horizontal pieces 4, the intermediate horizontal cross-pieces 5, and the vertical pieces 1 are made substantially as hereinbefore described, with the additional provision, however, in the vertical pieces, to wit: Where



the cross-pieces 5 are connected with the vertical pieces 1 the projections 3 of said vertical pieces are cut away, leaving nothing but a vertical core 2, thereby permitting said vertical pieces to revolve in the horizontal cross-pieces whenever it is desired to lock the parts together.

When it is desired to construct a grating, the operator should insert cross-pieces 1 in their corresponding perforations formed in their intermediate cross-pieces 5 and then rotate said vertical pieces about a quarter of a revolution, thereby locking them in one direction, and then to effect a locked position in the opposite or reversed direction the operator should apply the top and horizontal cross-pieces 4 to the corresponding ends of said vertical pieces and rivet them as hereinbefore stated, whereby said vertical pieces are rigidly locked in all directions.

Having fully described my invention, what I claim is—

1. Jail and other gratings consisting of an intermediate bar or bars provided with perforations, vertical bars provided with notched angular projections adapted to be received and turned in said perforations, thereby locking the same in one direction, and top and bottom horizontal bars provided with transverse perforations adapted to fit over the ends of said vertical bars, respectively, for rigidly locking the same, substantially as set forth.

2. Jail and other gratings consisting of in-

termediate horizontal bars provided with perforations and also on their lower and upper surfaces with webs or lips, vertical bars provided throughout their entire length with notched angular projections adapted to be received and turned in said perforations, thereby locking the same in one direction, and top and bottom horizontal bars provided with transverse perforations adapted to fit over the ends of said vertical bars, respectively, for rigidly locking the same, substantially as set forth.

3. In jail and other gratings, intermediate horizontal bars provided with lips or webs on their upper and lower faces, upper horizontal bars provided on their lower faces with lips or webs, and bottom horizontal bars provided on their upper faces with lips or webs, as and for the purposes specified.

4. In jail and other gratings, metallic vertical bars consisting of cores provided throughout their entire length with projections, substantially as set forth.

5. In jail and other gratings, metallic vertical bars consisting of cores provided throughout their entire length with angular projections, substantially as described.

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

PETER J. PAULY, JR.

Witnesses:

E. EVERETT LONGAN,  
C. F. KELLER.