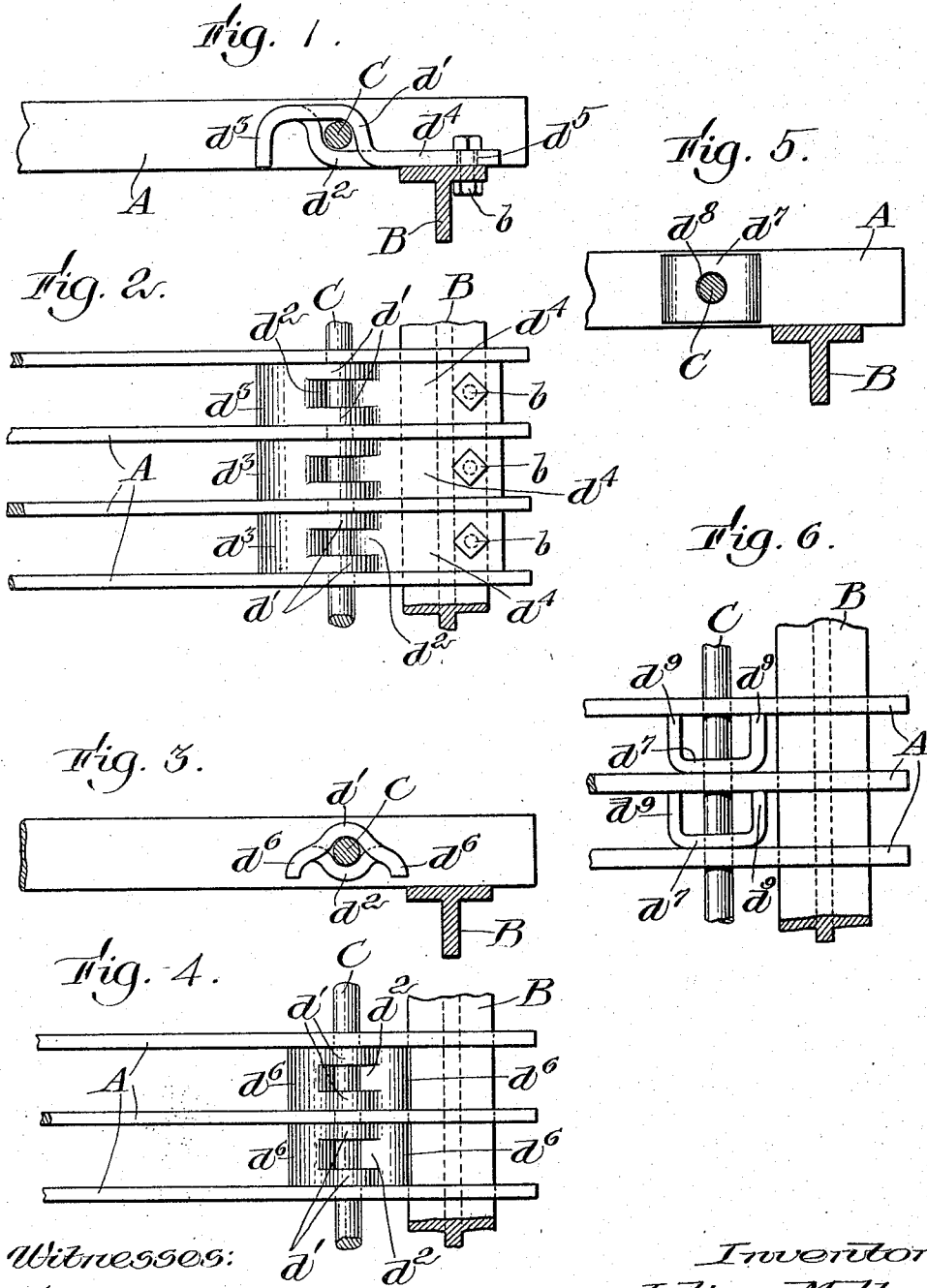


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SEPARATOR OR SPACER FOR GRATINGS.
APPLICATION FILED AUG. 20, 1914.

1,196,964.

Patented Sept. 5, 1916.



Witnesses:
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UNITED STATES PATENT OFFICE.

JULIUS MELTZ, OF CHELSEA, MASSACHUSETTS, ASSIGNOR TO LOUIS I. BECKWITH AND ARTHUR L. SMITH, BOTH OF BOSTON, MASSACHUSETTS, COPARTNERS DOING BUSINESS UNDER THE FIRM-NAME OF THE MARKET FORGE COMPANY, OF BOSTON, MASSACHUSETTS.

SEPARATOR OR SPACER FOR GRATINGS.

1,196,964.

Specification of Letters Patent.

Patented Sept. 5, 1916.

Application filed August 20, 1914. Serial No. 857,786.

To all whom it may concern:

Be it known that I, JULIUS MELTZ, a subject of the Czar of Russia, and resident of Chelsea, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Separators or Spacers for Gratings, of which the following is a specification.

This invention relates to improvements in the construction of metal gratings such as are used for the floors of fire escapes, sidewalk gratings, etc., and consists primarily in novel and improved separators or spacers used between the bars of the grating.

In the accompanying drawings which illustrate certain embodiments of the invention, Figure 1 is a side view of one form of separator showing its relation to the other elements of the floor or grating structure, in use; Fig. 2 is a plan view of said separators and floor structure; Fig. 3 is a side view of another form of separator embodying the invention, in use; Fig. 4 is a plan view of the same; Fig. 5 is a side view illustrating still another form of separator; and Fig. 6 is a plan view of the same.

For the purpose of illustration, I will describe a floor or grating structure suitable for use in fire escapes, but it will be understood that the structural details of the floor or grating itself form no part of the present invention. A, A, represent a series of metal floor strips, of usual form, set on edge a little way apart, and supported by suitable girders such as the metal T-beams B. A rod C of usual form, extends through a series of the floor bars A, to hold them in position.

Heretofore it has been the practice to place spacers or separators on rod C between the several bars A, to space them at the desired distance apart, consisting of tubular thimbles or short pipe sections, the rod C being passed alternately through the bars and thimbles. A good deal of difficulty and expense is involved in cutting such thimbles or short pipe sections without distorting them or leaving a bur which interferes with the passage of the rod through them, and the principal object of the present invention is to provide spacers or separators, free from such difficulties, which may be readily and cheaply punched or stamped out from flat plates of metal.

To produce the form of separator shown in Figs. 1 and 2, a flat strip or plate of metal is punched with suitable dies to form an eye portion for the rod, by slitting and bending sections of the plate in opposite directions, forming the oppositely curved loops or straps d' and d^2 , forming between them a hole or eye through which the rod C passes. At one side of the eye portion is a wing d^3 bent so as to form a bearing extending a substantial distance transversely of the floor bars A, to furnish a support and bearing for the bars A adapted to prevent them from tilting or tipping out of their upright position. The upper parts of loops d' afford similar support for the bars A near their upper edges, and another wing d^4 extending from the eye portion on the side opposite the wing d^3 , furnishes additional security against lateral displacement at the lower edges of the bars A. The wing d^4 in the form of the invention now under consideration, is elongated so as to overlie the T-beam B to which it may be fastened by bolt b passing through hole d^5 in wing d^4 and through one of the flanges of the beam B. Thus the device serves not only as a separator for properly spacing the bars A and supporting them on edge in upright position, but binds the flooring securely to the supporting base.

In the form of separator shown in Figs. 3 and 4, the eye portion is formed as before by punching up from a plate the oppositely curved loops d' and d^2 to form between them a passage for the rod C. But instead of making one short spacing and supporting wing and one elongated wing, both wings d^6 at each side of the eye portion are alike, and are similar in construction and function to wing d^3 of the form first described.

In the form of separator shown in Figs. 5 and 6, the plate is punched to form an eye portion d^7 with a hole d^8 for the rod C, and the bent over wing portions d^9 , d^{10} , which suitably space the bars A apart and also furnish the necessary lateral support to prevent the bars from tipping, as in the case of the wings in the other forms.

I claim:

1. In combination, a beam, a series of grating bars resting on said beam, a series of spacers separating said bars, each spacer comprising an eye portion, and a connector

adapted to be secured to said beam, and a rod extending through said bars and the eye portion of said spacers.

2. In combination, a beam, a series of
5 grating bars resting on said beam, a series of spacers separating said bars, each spacer comprising an eye portion and having a spacing wing at each end, one of said wings being elongated, a rod extending through
10 said bars and the eye portion of said spacers,

said elongated wing portion being secured to said beam and serving to secure the grating thereto.

Signed by me at Boston, Massachusetts, this 18th day of August 1914.

JULIUS MELTZ.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."