

(No Model.)

W. SOLT.
GRATE BAR.

No. 303,675.

Patented Aug. 19, 1884.

Fig. 1.

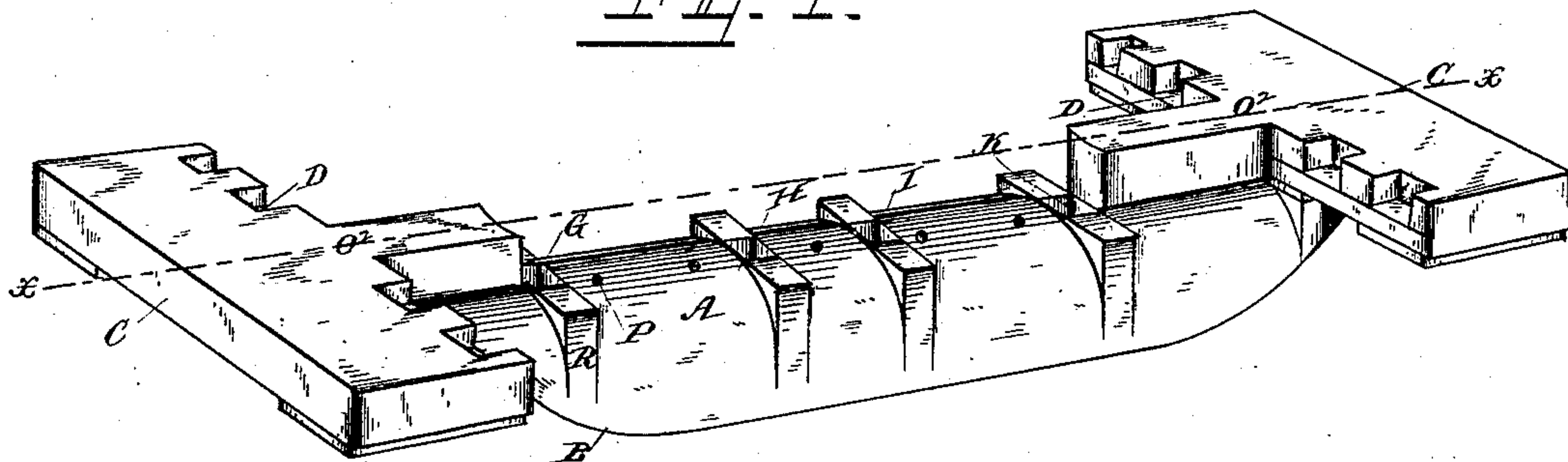


Fig. 2.

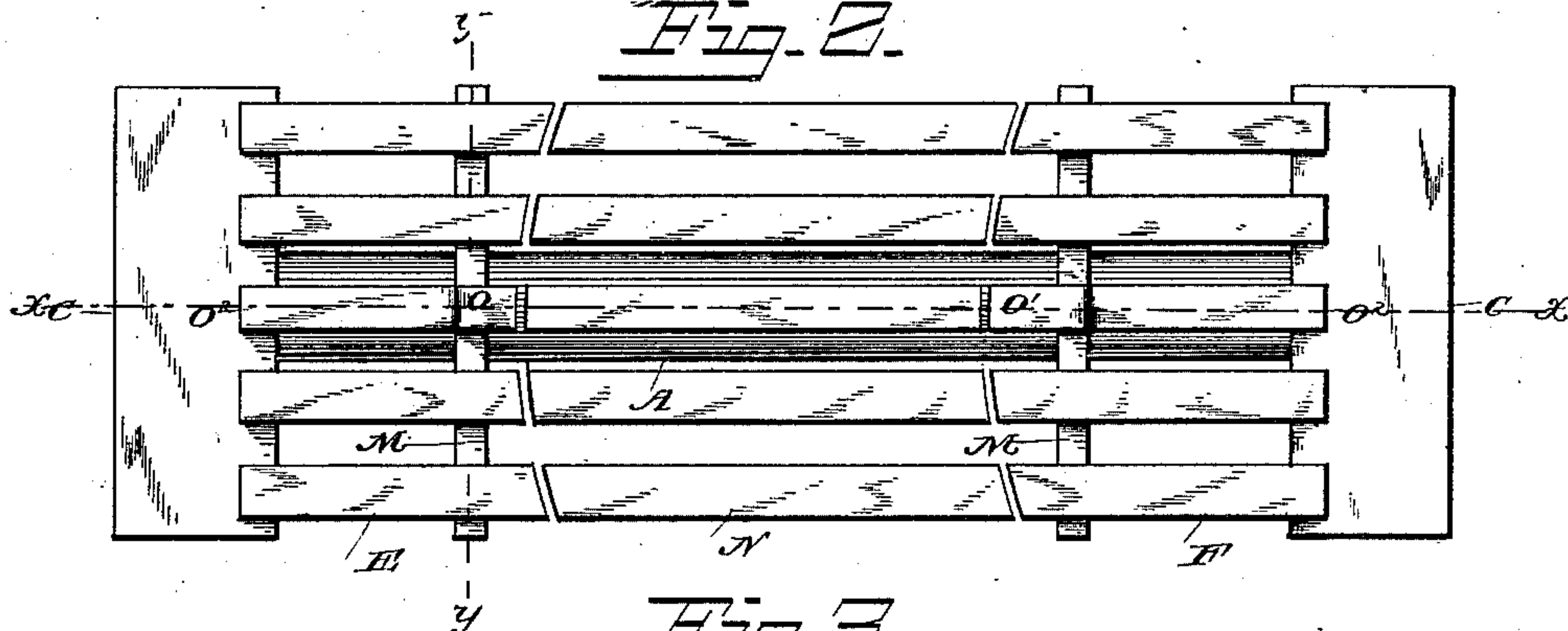


Fig. 3.

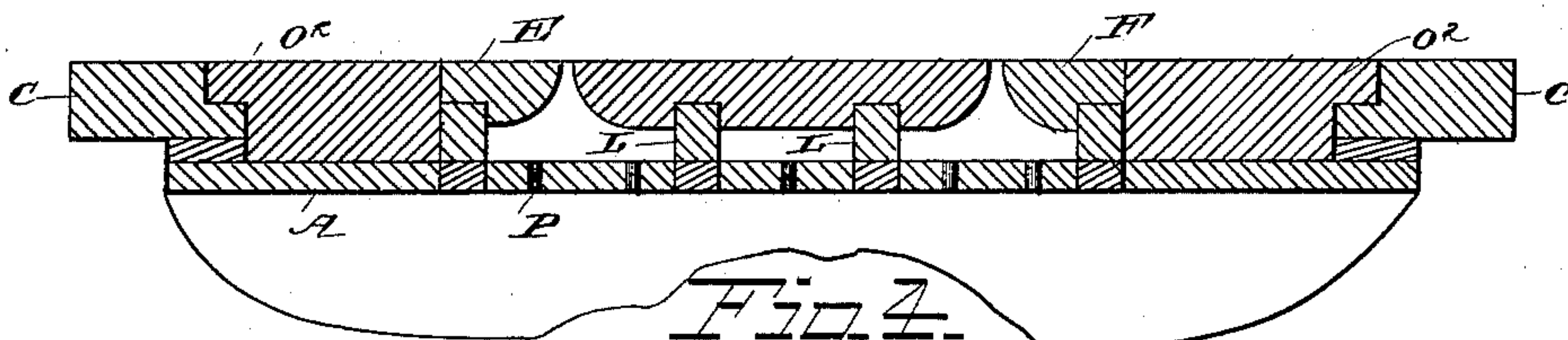
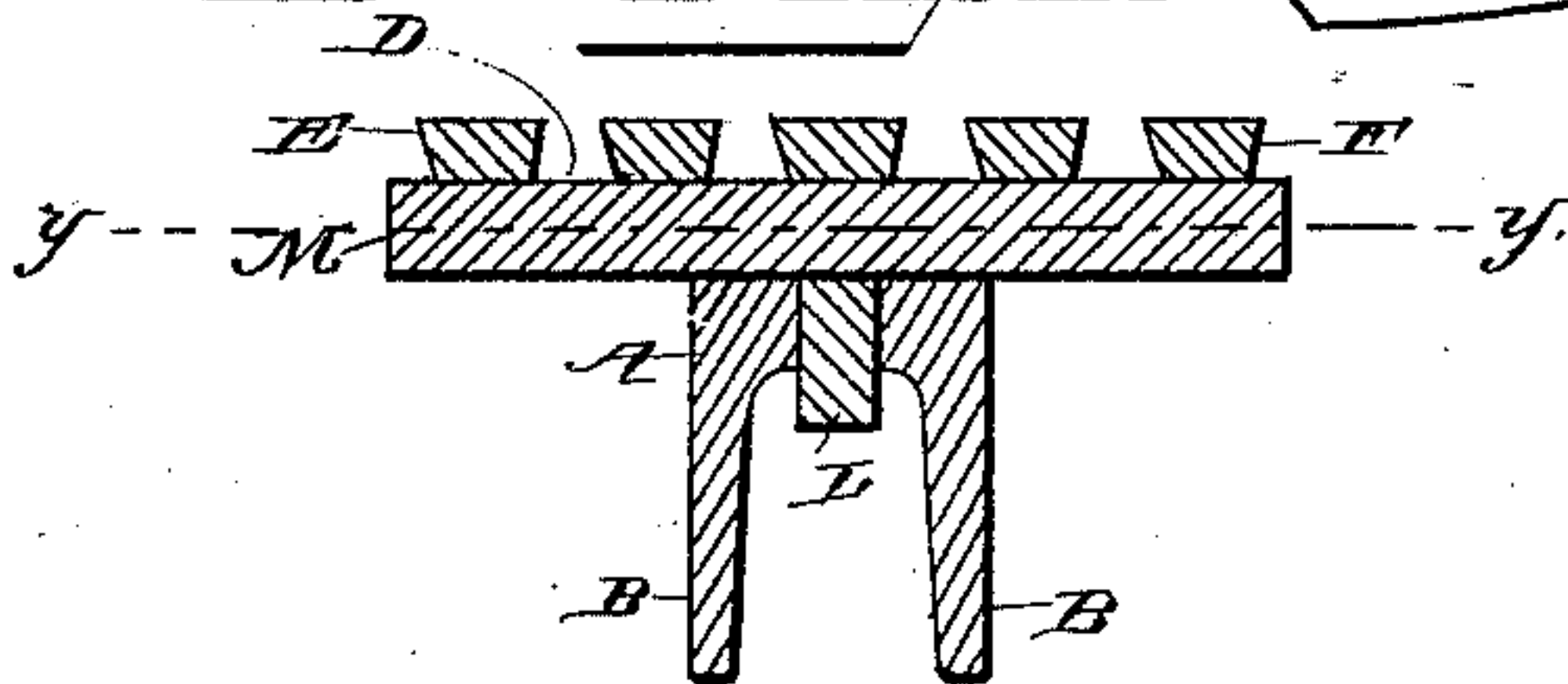


Fig. 4.



WITNESSES

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WILLIAM SOLT, OF FREELAND, PENNSYLVANIA.

GRATE-BAR.

SPECIFICATION forming part of Letters Patent No. 303,675, dated August 19, 1884.

Application filed April 19, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SOLT, a citizen of the United States, residing at Freeland, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Grate-Bar, of which the following is a specification, reference being had to the accompanying drawings.

This invention has relation to adjustable ventilator grate-bars for boiler-furnaces; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claims.

Figure 1 is a view in perspective of the channeled perforated grate-bar with the finger-sections removed. Fig. 2 is a plan view with the finger-sections in place. Fig. 3 is a vertical longitudinal sectional view on the line $x x$ in Fig. 2, and Fig. 4 is a transverse sectional view on the line $y y$ in Fig. 2.

Referring by letter to the accompanying drawings, A designates the channeled perforated ventilator grate-bar, which is in the shape in cross-section at its middle portion of an inverted U, the downwardly-projecting flanges or side walls, B B, being curved from end to end, as shown. This bar A is provided at its ends with the bearing-bars C C, which are built into the walls of the furnace in the usual manner. These bearing-bars or end plates, C C, are provided in the inner edges with seats D, for the reception of the end finger of the finger-sections E and F. The arch or top of the grate-bar A is provided with mortises G, H, I, and K, for the reception of tenons L on the transverse bars M of the finger-sections E, F, and N. The middle fingers, O O', of the end finger-sections are made sectional, one part, O², being cast with the channeled bar A. The top of the bar A is provided with a line of vertical perforations, P, for ventilating the bar and grate-finger sections, and also to keep the bar A cool, and

thus prolong its usefulness. The bar A will last for years on this account. When either of the finger-sections becomes burned so as to be worthless, the fire may be moved from it onto another section of the grate, and with the handle-tongs the worthless section may be quickly removed and replaced by a new one without pulling out the fire. The bar A is provided at each side of the mortises with laterally-extending shoulders R, which form the bearings for the transverse bars of the grate-sections. The ends of the sections are preferably made curved, as shown, for convenience in removing and replacing the sections.

This grate-bar can be made of any kind of suitable metal, and is cheap, simple, and durable. The curved ends also prevent the scraper or poker from dropping into the openings between the sections and becoming fast when being moved backward and forward over the grate.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The channeled and perforated bar A, provided with end plates, C C, having seats D, and the mortises and laterally-extending shoulders at their sides, in combination with the detachable finger-sections having their transverse bars provided with tenons, substantially as specified.

2. The combination, with the channeled and perforated grate-bar A, having the middle finger-sections, O², cast thereon, of the end sections provided with a section of the middle finger, substantially as specified.

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

WILLIAM SOLT.

Witnesses:

JAMES PEACOCK,
G. A. SOLT.