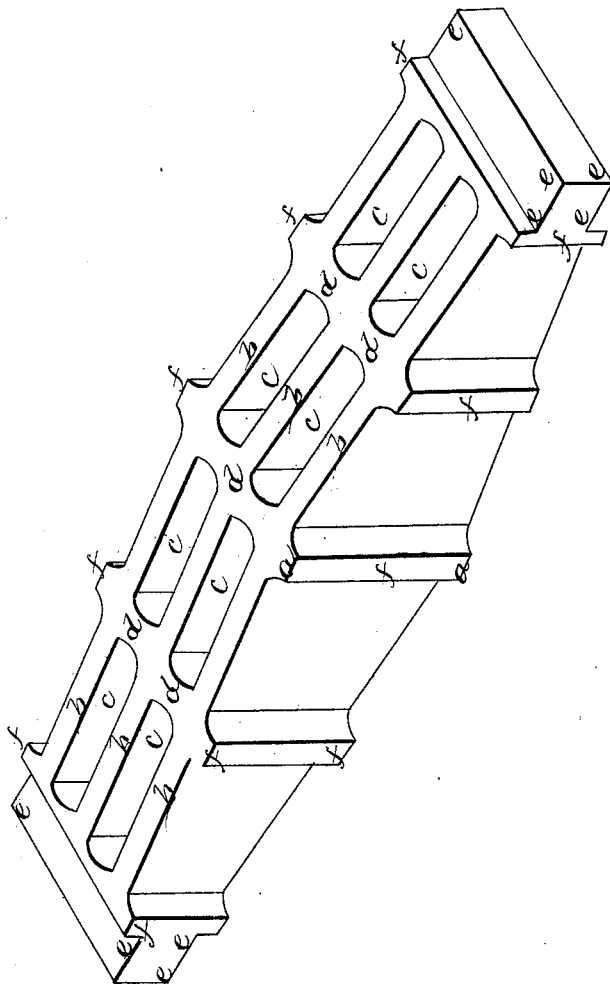


*C. Kingsland,*  
*Furnace-Grate Bar.*  
*N<sup>o</sup> 6799. Patented Oct. 16, 1849.*



# UNITED STATES PATENT OFFICE.

CORNELIUS KINGSLAND, OF ALLEGHENY CITY, PENNSYLVANIA.

## GRATE-BAR.

Specification of Letters Patent No. 6,799, dated October 16, 1849.

*To all whom it may concern:*

Be it known that I, CORNELIUS KINGSLAND, of the city and county of Allegheny and State of Pennsylvania, have invented  
5 a new and useful Improvement in Furnace Grate-Bars, which Bars are Applicable to the Furnaces of Steamboats, &c.; and I do hereby declare that the following is a full and exact description of the said improve-  
10 ment.

What I claim as new and my invention, and desire to secure by Letters Patent, is—

1. Making the center of the lower face or under side of the bar with the same swell  
15 or elevation, as the upper or top face, as shown at *a, a*, in the accompanying drawing; *b, b, b, b*, being the bars and *c, c, c, c*, the spaces; the bars connected at *d, d, d, d*; *e, e, e, e* being the shoulder or rabbet  
20 to support the bar when in its place in the furnace, and *f, f, f, f*, being projections to meet similar projections on the adjoining bars to keep them at the proper distance apart.

2. I do not claim as my invention, mak- 25  
ing the upper side of the bar with the swell or elevation in the middle of its length; but I do claim as my invention, making the upper or top face of the bar is destroyed by  
5 same rise or elevation, so that when the 30  
upper or top face of the bar is destroyed by the action of the fire, the bar can be turned or inverted, making the lower side to become the upper surface, and by that means  
10 present a new surface to the fire, causing 35  
thereby considerable saving in the expense of furnace bars.

3. I do not mean to be understood as  
15 limiting myself to any particular number of bars in each series, but to make one, two, 40  
three, or any other number of bars, in each series, as may be required, substantially as above described; for the purposes therein  
20 set forth.

C. KINGSLAND.

Attest:

E. R. WILSON,  
THOMAS FARLEY.