

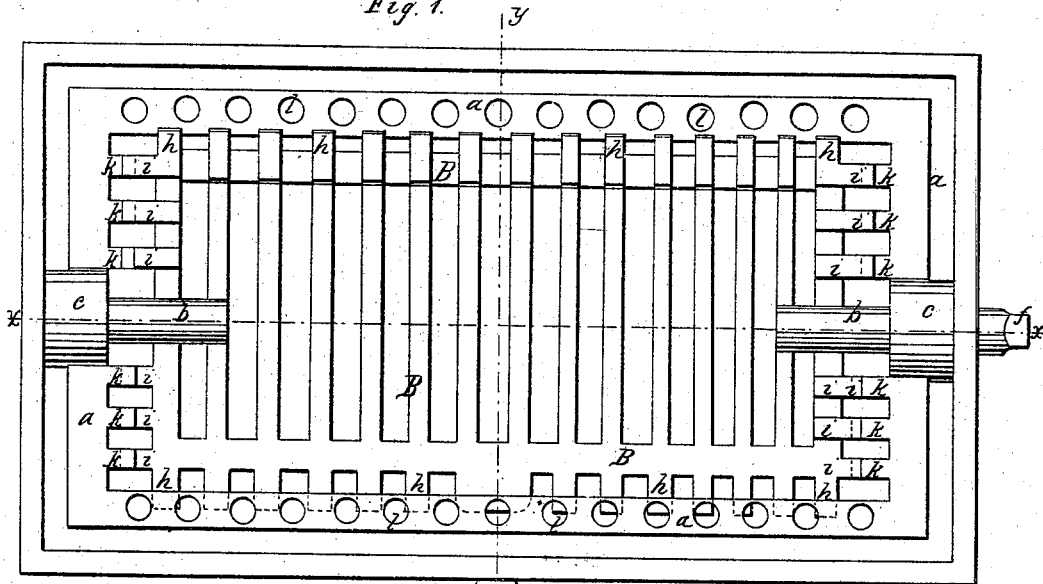
*N. J. Towne,*

*Furnace Grate.*

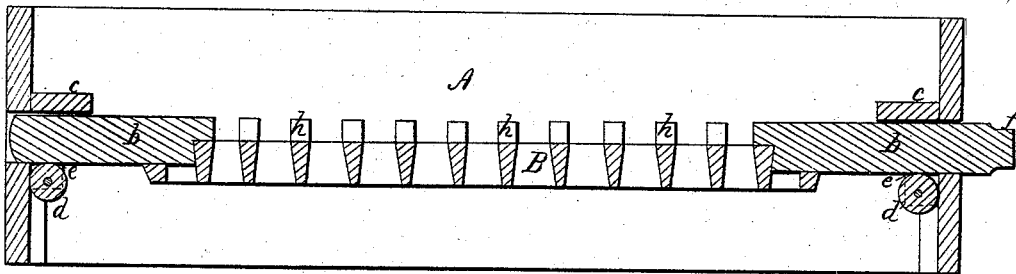
*N<sup>o</sup> 48,000.*

*Patented May 30, 1865.*

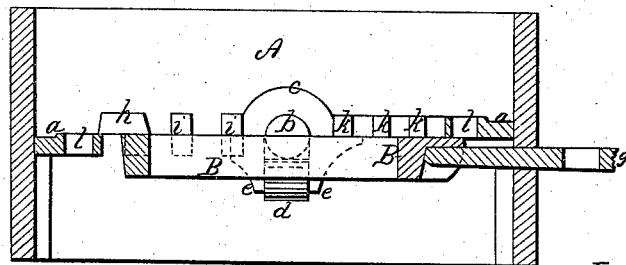
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses;*

*P. E. Fitchmacher,  
W. W. Stearns*

*Inventor;*

*N. J. Towne.*

# UNITED STATES PATENT OFFICE.

WM. J. TOWNE, OF NEWTON, MASSACHUSETTS.

## IMPROVEMENT IN GRATES.

Specification forming part of Letters Patent No. 48,000, dated May 30, 1865.

*To all whom it may concern:*

Be it known that I, WILLIAM J. TOWNE, of Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Grates for Stoves, Furnaces, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan of my improved grate. Fig. 2 is a longitudinal vertical section through the same on the line *xx* of Fig. 1. Fig. 3 is a transverse vertical section through the same on the line *yy* of Fig. 1.

Various descriptions of grates have been constructed having both a rectilinear horizontal and a rocking vertical movement, so as to allow of the ashes being shaken out and the coal "dumped" when required. The friction upon the journals of these grates, and in some cases between the grate and the frame in which it is placed, however, frequently renders it difficult to shake them in the direction of their length.

My invention has for its object to overcome these difficulties; and it consists in suspending the journals of the grate upon rollers, by which means the friction is greatly reduced and the operation of shaking the grate in the direction of its length much facilitated.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, *A* represents the fire-chamber, from the interior of which projects a flange or plate, *a*, which forms a frame for the grate *B*, the journals *b* of which pass through enlargements *c* on the flange *a* and rest on rollers *d*, which revolve on pins passing through lugs *e*, cast on the bottom of the flange *a*, by which arrangement the friction on the journals *b* is greatly reduced, and the grate can be moved back and forth in the direction of its length, to shake out the ashes, with much greater ease than heretofore. The grate is dumped in the ordinary manner by means of a lever, *g*, adapted to the outer end, *f*, of one of the journals *b*, and it is moved back and forth in the direction of its length, to shake out the ashes, by means of the same lever, *g*, one end of which is passed through a slot in the fire-chamber into a notch in the grate made to receive it. The lever *g* may, however, be dispensed with, if preferred, and the grate moved laterally by means of the projecting end *f* of the journal.

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

Suspending the journals *b* of the grate on rollers *d*, substantially as set forth, for the purpose specified.

WM. J. TOWNE.

Witnesses:

P. E. TESCHEMACHER,  
N. W. STEARNS.