

G. C. WAGGONER.

Improvement in Revolving Grate-Bars.

No. 132,423.

Patented Oct. 22, 1872.

Fig. 1.

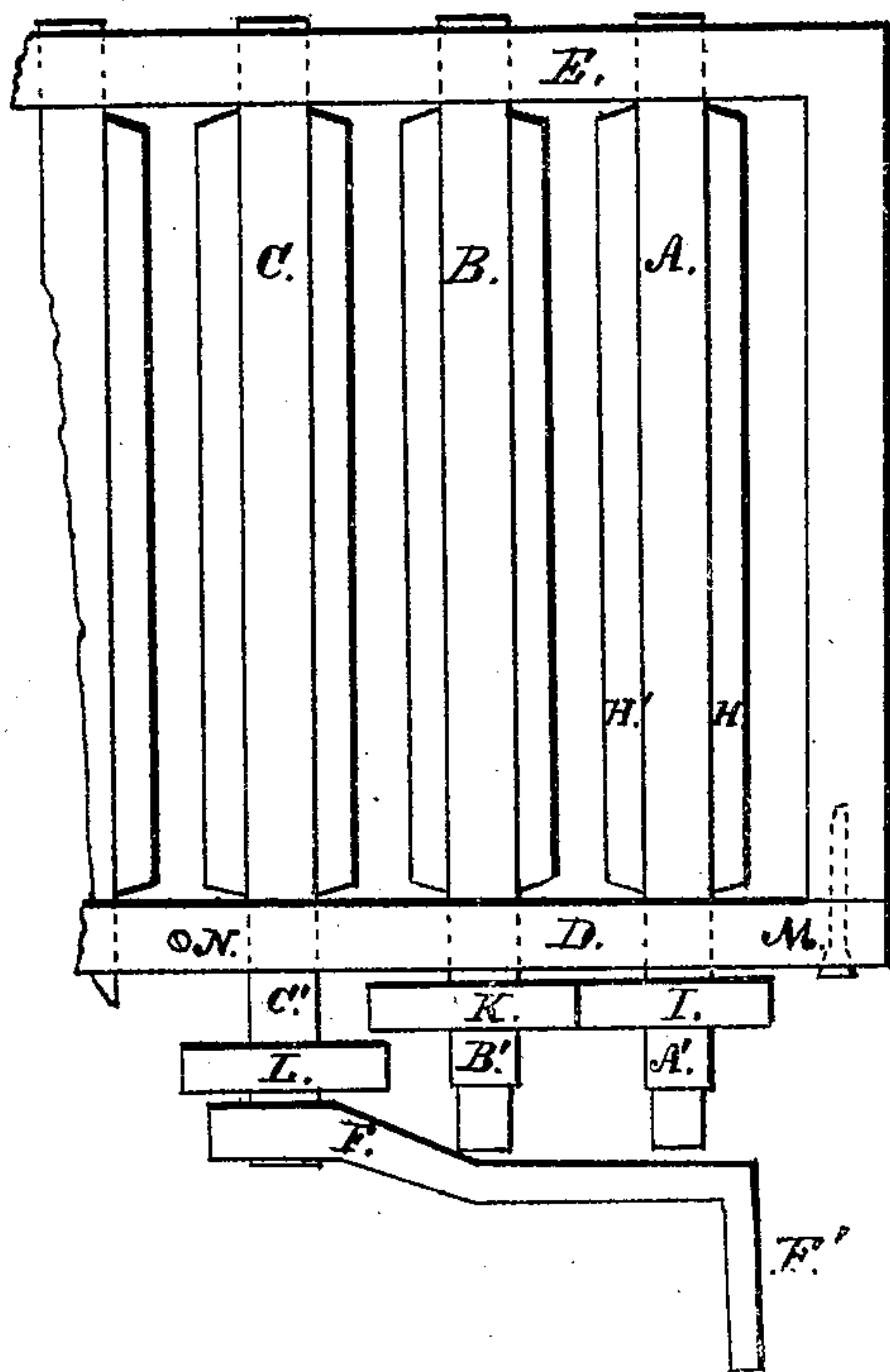
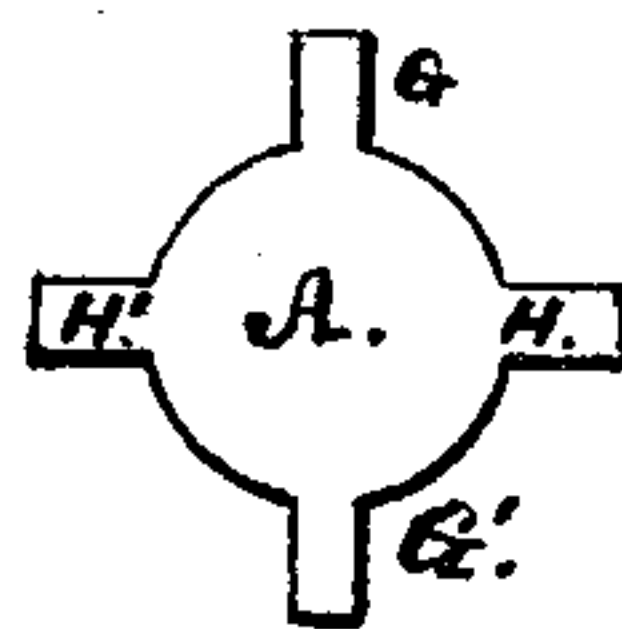


Fig. 2.



Witness:
Ernest Leech
W. C. Cheney

Inventor: -
George Cole Waggoner.
By Saml. J. Wallace.
Attorney.

UNITED STATES PATENT OFFICE.

GEORGE C. WAGGONER, OF HAMILTON, ILLINOIS.

IMPROVEMENT IN REVOLVING GRATE-BARS.

Specification forming part of Letters Patent No. **132,423**, dated October 22, 1872.

To all whom it may concern:

Be it known that I, GEORGE COLE WAGGONER, of Hamilton, Illinois, have made a new and useful Improvement in Grates for Furnaces, of which the following is a specification:

The object of this invention is to enable grates of furnaces to be cleaned more readily and better than usual. To do this I arrange as hereinafter set forth, referring to the accompanying drawing, in which—

Figure 1 is a plan of a grate.

The bars A B C have front and back supports D E, as required, and are set therein by rounded bearings, so that each bar may be separately turned over. This is done by the projecting ends of the bars A' B' C', which are fitted to receive a crank, F, for turning. The bars are turned to break up clinkers and to carry down clinkers, ashes, &c., and clean the bars and spaces between them for the air to pass. To strengthen the bars, and to enable them to act to better advantage on the matters on them, they are made with a cross-section having ribs G G' or G G' H H' on the sides, (shown in Fig. 2.) The ends of the bars each bear a pinion-wheel, J K L, which mesh into each other, so that when one is turned it moves the whole fleet of bars to clean them all at one action. The pinions are loose on the

bars so as to readily move along them to break the connection with the other pinions and enable either bar or any number to be turned separately when desired, or when extra hard work to turn. A rib along the side of the projecting end of the bar acts as a key on the pinion. The part of the front D that forms the tops of the bar-bearings forms a separate part, hinged by a bolt, M, and held by the bolt N at the other. This part may be raised to take out the grate-bars.

The bars, by turning, are kept from getting overheated on one side and warping.

I claim as my improvement—

In furnace-grates, where two or more bars are made to revolve by means of pinions on their projected ends, the construction and arrangement of such pinions as herein described and shown, so that they may slide upon their respective bars and be thus thrown in and out of gear at will without the necessity of removing the bars, and whereby each bar can be revolved independently of the rest, or any number of the series simultaneously, from either one of the bars.

GEORGE COLE WAGGONER.

Witnesses:

SAMUEL JACOB WALLACE,
I. N. TICHENOR.