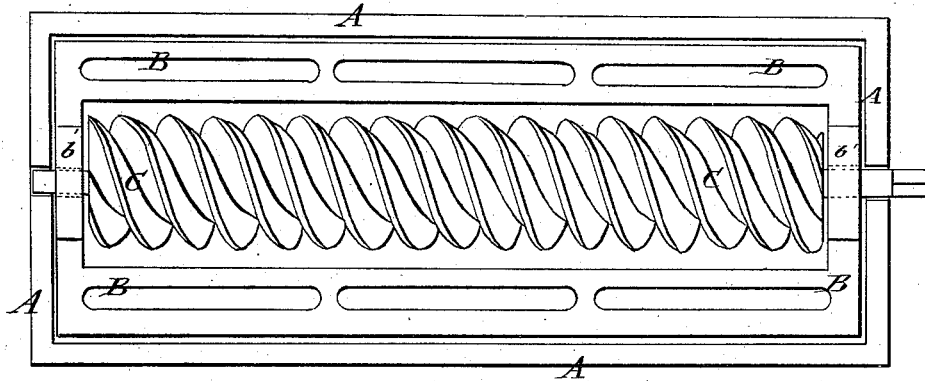


R. MACKELLAR.  
Fire-Grate.

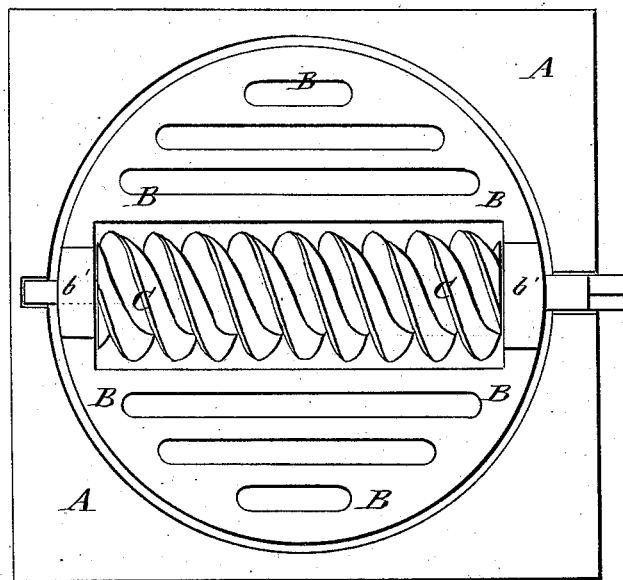
No. 216,872.

Patented June 24, 1879.

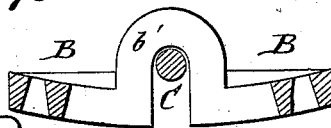
*Fig: 1.*



*Fig: 2.*



*Fig: 3.*



WITNESSES:

*Geo. M. Mott*  
*C. Sedgwick*

INVENTOR:

*R. Mackellar*

BY

*Mum Ho*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

ROBERT MACKELLAR, OF PEEKSKILL, NEW YORK.

## IMPROVEMENT IN FIRE-GRATES.

Specification forming part of Letters Patent No. **216,872**, dated June 24, 1879; application filed March 25, 1879.

### *To all whom it may concern:*

Be it known that I, ROBERT MACKELLAR, of Peekskill, in the county of Westchester and State of New York, have invented a new and useful Improvement in Fire-Grates, of which the following is a specification.

Figure 1 is a top view of a grate to which my improvement has been applied. Fig. 2 shows a modified form of the same. Fig. 3 is a detail section, showing the manner in which the grate is hung upon the journals of the screw.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish grates for burning soft and hard coal which shall be so constructed that the coal can be easily stirred and kept loose and free from ashes, so as to burn freely, and which shall be simple in construction and convenient in use.

The invention consists in the combination of the screw with the grate having a slot formed through its center, and with the frame that supports the said grate, as hereinafter fully described.

A represents the frame upon which the grate is hung. B is the grate, which has a wide slot formed through its center to receive the screw C. The journals of the screw C rest and work in bearing in the frame A, and the end of one

of the said journals projects, and is squared off to receive the key by which the said screw is operated.

Upon the ends of the grate B are formed upwardly-projecting lugs *b'*, which are notched from the lower side to receive and rest upon the journals of the screw C, as shown in the drawings.

With this construction the fire is stirred by revolving or rocking the screw C, the effect being to move the entire mass of the coal, keep it loose, and shake out the ashes, so that the fire will be made to burn free.

I am aware that it is not new to use a grate formed of an outer stationary and an inner movable part, each having corresponding long and short bars; also, that it is not new to use a center-piece pivoted within an opening in the grate; but

What I claim is—

The combination of the frame A, the grate B, having lugs *b'*, and the screw C, the latter being provided with journals supported in the frame and supporting the grate, as shown and described.

ROBERT MACKELLAR.

Witnesses:

J. ALEX. BRIGGS,  
JOHN C. KNAPP.